

Form 1 Page 1 Execution Page	<b>UNITED STATES SECURITIES AND EXCHANGE COMMISSION</b> <b>WASHINGTON, D.C. 20549</b> <b>APPLICATION FOR, AND AMENDMENTS TO APPLICATION FOR, REGISTRATION</b> <b>AS A NATIONAL SECURITIES EXCHANGE OR EXEMPTION FROM REGISTRATION</b> <b>PURSUANT TO SECTION 5 OF THE EXCHANGE ACT</b>	Date filed (MM/DD/YY):  06/27//19	OFFICIAL USE ONLY
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Warning: Failure to keep this form current and to file accurate supplementary information on a timely basis, or the failure to keep accurate books and records or otherwise comply with the provisions of law applying to the conduct of the applicant would violate the federal securities laws and may result in disciplinary, administrative or criminal action

INTENTIONAL MISSTATEMENTS OR OMISSIONS OF FACTS MAY CONSTITUTE CRIMINAL VIOLATIONS

APPLICATION  AMENDMENT

1. State the name of the applicant: MIAX PEARL, LLC
2. Provide the applicant's primary street address (Do not use a P.O. Box): 7 Roszel Road, Suite 5-A, Princeton, NJ 08540
3. Provide the applicant's mailing address (if different):
4. Provide the applicant's business telephone and facsimile number:  
Telephone: 609-897-7300; Facsimile: 609-987-2210
5. Provide the name, title and telephone number of a contact employee:  
Barbara J. Comly, EVP, General Counsel & Corporate Secretary  
609-897-7315
6. Provide the name and address of counsel for the applicant:  
Barbara J. Comly, EVP, General Counsel & Corporate Secretary  
MIAX PEARL, LLC  
7 Roszel Road, Suite 5-A  
Princeton, NJ 08540

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JUN 28 2019  
Washington, DC



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7. Provide the date applicant's fiscal year ends: December 31
8. Indicate legal status of applicant:  Corporation  Sole Proprietorship  Partnership  
 Limited Liability Company  Other (specify):

If other than a sole proprietor, indicate the date and place where applicant obtained its legal status (e.g. state where incorporated, place where partnership agreement was filed or where applicant entity was formed):

- (a) Date (MM/DD/YY): 02/11/16      (b) State/Country of formation: Delaware
- (c) Statute under which applicant was organized: Delaware Limited Liability Company Act, 6 Del. C. 18-1d et seq.

**EXECUTION:** The applicant consents that service of any civil action brought by, or notice of any proceeding before, the Securities and Exchange Commission in connection with the applicant's activities may be given by registered or certified mail or confirmed telegram to the applicant's contact employee at the main address, or mailing address if different, given in Items 2 and 3. The undersigned, being first duly sworn, deposes and says that he/she has executed this form on behalf of, and with the authority of, said applicant. The undersigned and applicant represent that the information and statements contained herein, including exhibits, schedules, or other documents attached hereto, and other information filed herewith, all of which are made a part hereof, are current, true, and complete.

Date: June 27, 2019

MIAX PEARL, LLC

By: *Barbara J. Comly*  
Barbara J. Comly  
EVP, General Counsel & Corporate Secretary

Subscribed and sworn before me this 27<sup>th</sup> day of June, 2019.

*Jane Post*  
Jane Post  
Notary Public of the State of New Jersey  
My Commission Expires October 27, 2019

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This page must always be completed in full with original, manual signature and notarization.  
Affix notary stamp or seal where applicable.

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Barbara J. Comly  
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June 27, 2019

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Washington, DC

**VIA FEDERAL EXPRESS**

Jeannette Marshall  
Division of Trading and Markets  
Office of Market Supervision  
Securities and Exchange Commission  
100 F. Street, N.E.  
Washington, D.C. 20549

**Re: MIAX PEARL, LLC ("PEARL")  
Amendment 2019-7 to Form 1 Application**

Dear Ms. Marshall:

Enclosed for official filing pursuant to Rule 6a-2(b) are an original and two copies of Amendment 2019-7 to the Form 1 Application of PEARL, which includes the following changes:

Exhibits D, I, K, M & N – Annual filing pursuant to Rule 6a-2(b)

Please do not hesitate to contact me if you have any questions in connection with this matter.

Very truly yours,

Barbara J. Comly  
EVP, General Counsel & Corporate Secretary

Enclosures

cc: Marlene Olsen

**MIAX PEARL, LLC**  
**(“PEARL”)**

**Form 1 Amendment 2019-7**  
***Annual Filing***

**June 27, 2019**

<b>EXHIBIT D</b>	Financial statements for each subsidiary or affiliate of the exchange.
<b>EXHIBIT I</b>	Audited financial statements of the applicant for the latest fiscal year.
<b>EXHIBIT K</b>	Shareholders owning 5% or more of the applicant.
<b>EXHIBIT M</b>	List of members of the exchange.
<b>EXHIBIT N</b>	Schedule of securities listed or traded pursuant to unlisted trading privileges on the exchange.

Exhibit D

## EXHIBIT D

### Exhibit Request:

For each subsidiary or affiliate of the exchange, provide unconsolidated financial statements for the latest fiscal year. Such financial statements shall consist, at a minimum, of a balance sheet and an income statement with such footnotes and other disclosures as are necessary to avoid rendering the financial statements misleading. If any affiliate or subsidiary is required by another Commission rule to submit annual financial statements, a statement to that effect, with a citation to the other Commission rule, may be provided in lieu of the financial statements required here.

### Response:

1. Unaudited unconsolidated financial statements of Miami International Holdings, Inc. as of December 31, 2018 are attached.
2. Audited unconsolidated financial statements of Miami International Securities Exchange, LLC as of December 31, 2018 are attached.
3. Audited unconsolidated financial statements of MIAX Emerald, LLC as of December 31, 2018 are attached.
4. Unaudited unconsolidated financial statements of Miami International Technologies, LLC as of December 31, 2018 are attached.
5. Miami International Futures Exchange, LLC and MIAX Global, LLC are not yet active and financial statements are not available for these companies.



**MIAMI INTERNATIONAL HOLDINGS, INC.**

**Financial Statements**  
**December 31, 2018 and 2017**  
**(Unaudited)**

**MIAMI INTERNATIONAL HOLDINGS, INC.**  
**UNCONSOLIDATED BALANCE SHEETS**  
**(UNAUDITED)**

	<b>2018</b>	<b>2017</b>
<b>ASSETS</b>		
<b>CURRENT ASSETS</b>		
Cash and cash equivalents	\$ 5,705,721	\$ 5,111,469
Restricted cash	400,017	400,017
Prepaid and other current assets	1,785,864	1,745,955
Total current assets	7,891,602	7,257,441
Fixed assets, net of depreciation and amortization	4,292,457	4,396,129
Other assets	907,663	769,449
Due from subsidiaries (to Miami International Holdings, Inc.)	333,988,311	322,041,779
Total assets	\$ 347,080,033	\$ 334,464,798
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>		
<b>CURRENT LIABILITIES</b>		
Accounts payable and other liabilities	\$ 3,110,352	\$ 2,348,810
Accrued compensation payable	2,480,462	2,045,387
Current debt	11,678,761	5,684,886
Total current liabilities	17,269,575	10,079,083
Long term debt	29,714,139	33,031,788
Warrants with puttable shares (Cash obligation December 31, 2018 and 2017, \$0)	134,751,201	31,900,901
Total liabilities	181,734,915	75,011,772
<b>SHAREHOLDERS' EQUITY</b>		
Preferred stock - par value \$0.001 (25,000,000 authorized; 436,000 Series B issued and outstanding at December 31, 2018 and 6,000 Series B issued and outstanding at December 31, 2017)	436	6
Common stock - voting and nonvoting, par value \$0.001 (600,000,000 authorized (voting 400,000,000, nonvoting 200,000,000); 66,749,702 issued and outstanding at December 31, 2018 (voting 61,990,581, nonvoting 4,759,121) and 62,758,799 issued and outstanding at December 31, 2017 (voting 59,044,678, nonvoting 3,714,121))	66,750	62,759
Additional paid in capital in excess of par	362,145,185	425,911,314
Accumulated deficit	(196,867,253)	(166,521,053)
Total shareholders' equity	165,345,118	259,453,026
Total liabilities and shareholders' equity	\$ 347,080,033	\$ 334,464,798

**MIAMI INTERNATIONAL HOLDINGS, INC.**  
**UNCONSOLIDATED STATEMENTS OF OPERATIONS**  
**(UNAUDITED)**

	<u>Years Ended December 31,</u>	
	<u>2018</u>	<u>2017</u>
REVENUES		
Other revenue	\$ 3,139	\$ -
Total revenues	<u>3,139</u>	<u>-</u>
OPERATING EXPENSES		
Employee compensation and benefits	9,275,266	5,286,593
Information technology and communication costs	26,263	10,751
Depreciation and amortization	1,327,689	1,299,677
Occupancy costs	536,709	378,258
Professional services	4,337,906	2,166,597
Financial and banking consulting services	1,621,392	1,571,491
Trading operations costs	10,055	-
Share based compensation to third parties	809,287	502,835
Directors' fees	515,837	386,888
Other	<u>1,118,647</u>	<u>808,348</u>
Total operating expenses	<u>19,579,051</u>	<u>12,411,438</u>
OPERATING LOSS	<u>(19,575,912)</u>	<u>(12,411,438)</u>
Interest expense	(6,050,696)	(5,196,973)
Amortization of debt discount and beneficial conversion feature	(661,504)	(485,281)
Financing related costs	(4,058,088)	(2,765,672)
Gain on sale of State NOL	<u>-</u>	<u>7,561,527</u>
NET LOSS	<u>\$ (30,346,200)</u>	<u>\$ (13,297,837)</u>

**MIAMI INTERNATIONAL HOLDINGS, INC.**  
**UNCONSOLIDATED STATEMENTS OF CASH FLOWS**  
**(UNAUDITED)**

	<b>Years Ended December 31,</b>	
	<b>2018</b>	<b>2017</b>
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
Net loss	\$ (30,346,200)	\$ (13,297,837)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities		
Amortization of debt discount	437,007	400,649
Amortization of beneficial conversion	224,497	84,632
Debt conversion expense	155,994	-
Deferred interest	141,961	2,707,643
Depreciation expense	1,327,689	1,299,677
Share based compensation expense	3,933,068	2,962,574
Changes in operating assets and liabilities		
Share based compensation expense allocated to subsidiaries	16,937,319	26,668,961
Prepaid and other current assets	(39,909)	37,591
Other assets	(138,214)	(242,299)
Accounts payable and other liabilities	761,542	(128,041)
Accrued compensation payable	435,075	600,221
Net cash provided by (used in) operating activities	(6,170,171)	21,093,771
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
Capital expenditures	(670,421)	218,960
Net cash provided by (used in) investing activities	(670,421)	218,960
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>		
Proceeds from debt	12,558,578	1,139,702
Repayments of term debt	(64,702)	(2,167,865)
Proceeds from purchase of warrants and warrant extension	-	2,515,811
Proceeds from issuance of Series B Preferred stock	530,000	-
Proceeds from issuance of common stock	6,357,500	3,079,087
Due from subsidiaries (to Miami International Holdings, Inc.)	(11,946,532)	(20,775,010)
Net cash provided by (used in) financing activities	7,434,844	(16,208,275)
Increase (decrease) in cash and cash equivalents	594,252	5,104,456
Cash and cash equivalents at beginning of year	5,111,469	7,013
Cash and cash equivalents at end of year	\$ 5,705,721	\$ 5,111,469
Cash paid during the year for interest	\$ 5,521,114	\$ 2,154,801
<b>Non-cash investing activities</b>		
No Non-cash amount related to capitalized internally developed software	\$ 23,828	\$ -
Total non-cash investing activities	\$ 23,828	\$ -
Conversion of short term loan to common stock	\$ 10,001,520	\$ -

**MIAMI INTERNATIONAL HOLDINGS, INC.**  
**UNCONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY**  
**December 31, 2018 and 2017**  
**(UNAUDITED)**

	Preferred Stock - Series B		Common Stock - Voting and Nonvoting		Additional Paid in Capital	Accumulated Deficit	Total Shareholders Equity (Deficit)
	Shares	Amount	Shares	Amount			
<b>Balance, December 31, 2016</b>	6,000	6	61,953,104	61,953	392,910,230	(153,223,215)	239,748,974
Issuance of common stock	-	-	300,000	300	1,779,456	-	1,779,756
Issuance of warrant extensions	-	-	-	-	2,515,811	-	2,515,811
Issuance of warrants with common stock	-	-	-	-	20,244	-	20,244
Issuance of common stock - warrant exercises	-	-	319,772	320	1,278,767	-	1,279,087
Issuance of common stock - debt	-	-	77,590	78	516,767	-	516,845
Issuance of warrants with debt amendments	-	-	-	-	96,291	-	96,291
Warrants with puttable shares	-	-	-	-	(2,795,831)	-	(2,795,831)
Share based compensation - issuance of common stock net of forfeitures for employees and consultants	-	-	108,333	108	3,179,704	-	3,179,812
Share based compensation - issuance of warrants - common stock	-	-	-	-	320,451	-	320,451
Share based compensation - issuance of warrants - strategic investors	-	-	-	-	20,176,291	-	20,176,291
Share based compensation - issuance of options net of forfeitures	-	-	-	-	5,913,133	-	5,913,133
Net loss	-	-	-	-	-	(13,297,838)	(13,297,838)
<b>Balance, December 31, 2017</b>	<u>6,000</u>	<u>\$ 6</u>	<u>62,758,799</u>	<u>\$ 62,759</u>	<u>\$ 425,911,314</u>	<u>\$ (166,521,053)</u>	<u>\$ 259,453,026</u>
Issuance of common stock	-	-	910,741	911	5,742,903	-	5,743,814
Issuance of warrants with common stock	-	-	-	-	276,186	-	276,186
Issuance of common stock - warrant exercises	-	-	434,025	434	337,066	-	337,500
Issuance of common stock - debt conversions	-	-	1,554,428	1,554	9,999,966	-	10,001,520
Issuance of common stock - debt	-	-	46,709	47	309,459	-	309,506
Issuance of warrants with debt or debt amendments	-	-	-	-	285,424	-	285,424
Beneficial conversion feature	-	-	-	-	430,935	-	430,935
Debt conversion expense	-	-	-	-	155,994	-	155,994
Warrants with puttable shares	-	-	-	-	(102,850,300)	-	(102,850,300)
Employee stock transactions	430,000	430	-	-	529,570	-	530,000
Share based compensation - issuance of common stock net of forfeitures for employees and consultants	-	-	1,045,000	1,045	3,884,874	-	3,885,919
Share based compensation - issuance of warrants - common stock	-	-	-	-	491,078	-	491,078
Share based compensation - issuance of warrants - strategic investors	-	-	-	-	9,400,163	-	9,400,163
Share based compensation - issuance of options net of forfeitures	-	-	-	-	7,240,553	-	7,240,553
Net loss	-	-	-	-	-	(30,346,200)	(30,346,200)
<b>Balance, December 31, 2018</b>	<u>436,000</u>	<u>\$ 436</u>	<u>66,749,702</u>	<u>\$ 66,750</u>	<u>\$ 362,145,185</u>	<u>\$ (196,867,253)</u>	<u>\$ 165,345,118</u>



Financial Statements and Report of  
Independent Certified Public Accountants

**MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC**

December 31, 2018 and 2017

# MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

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## REPORT OF INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS

### Board of Directors Miami International Securities Exchange, LLC

We have audited the accompanying financial statements of Miami International Securities Exchange, LLC (the “Company”), which comprise the balance sheets as of December 31, 2018 and 2017, and the related statements of operations and member’s deficit, and cash flows for the years then ended, and the related notes to the financial statements.

#### Management’s responsibility for the financial statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

#### Auditor’s responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor’s judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity’s preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity’s internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.



Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Miami International Securities Exchange, LLC as of December 31, 2018 and 2017, and the results of its operations and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

*Grant Thornton LLP*

New York, New York  
June 26, 2019

# MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

## Balance Sheets

December 31, 2018 and 2017

	<u>2018</u>	<u>2017</u>
<b>ASSETS</b>		
<b>CURRENT ASSETS</b>		
Cash and cash equivalents	\$ 965,861	\$ 1,081,120
Accounts receivable	6,324,492	4,927,162
Marketing fees receivable	2,236,699	1,940,167
Prepaid and other current assets	<u>1,172,191</u>	<u>1,534,630</u>
Total current assets	10,699,243	9,483,079
Fixed assets, net of depreciation and amortization	3,895,829	5,864,864
Internally developed software, net of amortization	8,673,639	9,554,881
Other assets	<u>1,118,936</u>	<u>2,425,377</u>
Total assets	<u>\$ 24,387,647</u>	<u>\$ 27,328,201</u>
<b>LIABILITIES AND MEMBER'S EQUITY</b>		
<b>CURRENT LIABILITIES</b>		
Accounts payable and other liabilities	\$ 2,392,806	\$ 2,657,850
Marketing fees payable	2,271,143	1,966,174
Accrued compensation payable	1,939,211	2,621,039
Current debt	722,542	848,556
Deferred transaction revenues	<u>-</u>	<u>1,072,938</u>
Total current liabilities	7,325,702	9,166,557
Due to Miami International Holdings, Inc.	243,559,226	268,392,345
Long term debt	<u>531,030</u>	<u>1,059,698</u>
Total liabilities	251,415,958	278,618,600
Commitments and contingencies (Note 5)		
<b>DEFICIT IN MEMBER'S EQUITY</b>		
Accumulated losses	<u>(227,028,311)</u>	<u>(251,290,399)</u>
Total member's deficit	<u>(227,028,311)</u>	<u>(251,290,399)</u>

*The accompanying notes are an integral part of these financial statements.*

**MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC**  
**Statements of Operations and Member's Deficit**  
**December 31, 2018 and 2017**

	<u>Years Ended December 31,</u>	
	<u>2018</u>	<u>2017</u>
REVENUES		
Transaction fees	\$ 46,984,676	\$ 44,680,673
Access fees	17,609,914	16,430,988
Regulatory fees	22,395,308	18,719,283
Market data fees	3,795,925	4,122,069
Other revenue	<u>1,085,706</u>	<u>898,254</u>
Total revenues	91,871,530	84,851,267
COST OF REVENUES		
Transaction rebates	<u>(28,170,516)</u>	<u>(23,776,267)</u>
NET REVENUES	<u>63,701,014</u>	<u>61,075,000</u>
OPERATING EXPENSES INCURRED DIRECTLY OR ALLOCATED FROM PARENT		
Employee compensation and benefits	11,997,098	17,442,710
Information technology and communication costs	3,977,116	4,624,547
Depreciation and amortization	6,179,506	7,587,202
Occupancy costs	945,431	1,209,993
Professional services	197,417	391,134
Regulatory services fees	1,025,051	1,219,827
Financial and banking consulting services	353,837	465,480
Trading operations costs	7,712,404	8,557,071
Share based compensation to third parties	21,405	66,517
Directors' fees	1,317,798	1,062,107
Other	<u>1,145,259</u>	<u>1,392,453</u>
Total operating expenses	<u>34,872,322</u>	<u>44,019,041</u>
OPERATING PROFIT	<u>28,828,692</u>	<u>17,055,959</u>
Interest expense	(138,587)	(177,256)
Financing related costs	<u>(4,428,017)</u>	<u>(20,176,291)</u>
NET INCOME (LOSS)	<u>24,262,088</u>	<u>(3,297,588)</u>
Member's deficit at beginning of year	<u>(251,290,399)</u>	<u>(247,992,811)</u>
Member's deficit at end of year	<u>\$ (227,028,311)</u>	<u>\$ (251,290,399)</u>

*The accompanying notes are an integral part of these financial statements.*

**MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC**  
**Statements of Cash Flows**  
**December 31, 2018 and 2017**

	<u>Years Ended December 31,</u>	
	<u>2018</u>	<u>2017</u>
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
Net profit (loss)	\$ 24,262,088	\$ (3,297,588)
Adjustments to reconcile net profit (loss) to net cash provided by operating activities		
Depreciation and amortization	6,179,506	7,587,202
Changes in operating assets and liabilities		
Accounts receivable	(1,397,330)	862,693
Marketing fees receivable	(296,532)	537,143
Prepaid and other current assets	362,438	473,833
Other assets	1,306,441	(1,251,823)
Accounts payable and other liabilities	(265,044)	(627,974)
Marketing fees payable	304,969	(536,479)
Accrued compensation payable	(681,828)	1,208,152
Deferred transaction revenue	(1,072,938)	1,072,938
Net cash provided by (used in) operating activities	<u>28,701,770</u>	<u>6,028,097</u>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
Capital expenditures	<u>(3,252,351)</u>	<u>(4,053,275)</u>
Net cash used in investing activities	<u>(3,252,351)</u>	<u>(4,053,275)</u>
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>		
Proceeds from debt	130,134	159,859
Repayments of term debt	(861,693)	(3,412,034)
Due to Miami International Holdings, Inc.	<u>(24,833,119)</u>	<u>2,192,388</u>
Net cash provided by (used in) financing activities	<u>(25,564,678)</u>	<u>(1,059,787)</u>
Increase (decrease) in cash and cash equivalents	(115,259)	915,035
Cash and cash equivalents at beginning of year	<u>1,081,120</u>	<u>166,085</u>
Cash and cash equivalents at end of year	<u>\$ 965,861</u>	<u>\$ 1,081,120</u>
Cash paid during the year for interest	<u>\$ 138,587</u>	<u>\$ 177,256</u>
<b>Non-cash investing activities</b>		
Assets acquired under capital leases	\$ 76,878	\$ 1,436,948
Non-cash amount related to capitalized internally developed software	<u>304,491</u>	<u>365,100</u>
Total non-cash investing activities	<u>\$ 381,369</u>	<u>\$ 1,802,048</u>

*The accompanying notes are an integral part of these financial statements.*

# MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

## Notes to Financial Statements

### December 31, 2018 and 2017

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#### 1. ORGANIZATION AND OPERATIONS

Miami International Securities Exchange, LLC (“MIAX” or the “Company”) was formed in the State of Delaware on September 10, 2007 and is a wholly-owned subsidiary of Miami International Holdings, Inc. (the “Parent” or “MIH”), and an affiliate of MIAX PEARL, LLC (“PEARL”), Miami International Technologies, LLC (“MIAX Technologies”), Miami International Futures Exchange, LLC (“MIAX Futures”) and MIAX Global, LLC, which was formed on June 30, 2015. PEARL, a second equity options exchange which launched on February 6, 2017 was formed to provide a marketplace for a different market model, the price-time priority model. Emerald, a third equity options exchange which launched on March 1, 2019 is a hybrid of the Company and PEARL exchanges, with a pro-rata market model similar to that of the Company, combined with maker-taker pricing which is offered by PEARL. MIAX Futures intends to provide a marketplace and facilities for the trading of futures products for its members, but is currently inactive. MIAX Technologies will sell or license trading technology. MIAX Global focuses on merger, acquisition and joint venture activities of MIH.

In November 2012, the Company completed the development of its trading systems in anticipation of an early December launch. On December 3, 2012, MIAX received an Approval Order from The United States Securities and Exchange Commission (“SEC”) of its application for registration as a National Securities Exchange and began trading equity options on December 7, 2012.

In December 2011, the Board of Directors approved the amendment by the Parent of its Restated Certificate of Incorporation to place certain ownership and voting limitations on the holders of capital stock of the Parent as required by the SEC in connection with the approval of MIAX as a registered national securities exchange pursuant to Section 6(a) of the Securities and Exchange Act of 1934 (the “Exchange Act”) (the limitations collectively referred to herein as the “Share Restrictions”), which Share Restrictions apply commencing on December 3, 2012 (the “Registration Date”) that MIAX is registered as a national securities exchange pursuant to Section 6(a) of the Exchange Act (the “Amendment”). The Amendment became effective upon approval of the same by the shareholders of the Parent on August 31, 2012.

In December 2011, the Parent’s Board of Directors also approved the Amended and Restated Bylaws of the Parent containing provisions required in connection with the registration of MIAX as a national securities exchange, which Amended and Restated Bylaws became effective on the August 31, 2012.

Due to the fact that the Company has incurred a cumulative loss of approximately \$227 million from February 27, 2008 (date of inception) to December 31, 2018, substantial doubt was raised in the past about the Company’s ability to continue as a going concern. These periodic shortfalls were covered through capital raises and short-term borrowing but the Company’s continuation as a going concern was dependent on its ability to obtain this additional financing.

In an effort to address the conditions and events that gave rise to this situation, management implemented a plan that included a refinancing with its current lender which has provided a substantial cash surplus for the next 12-24 month period. This new loan agreement for \$77 million (of which approximately \$43 million was utilized to repay the outstanding debt with the same lender), is described in more detail in Note 12. To further ensure that the three exchange subsidiaries adequately fund their operations and fulfill their obligations, the parent company, MIH has executed separate funding agreements with MIAX, PEARL and Emerald which provide for seed capital and guarantee ongoing financial support.

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Based on the developments outlined above which have substantially enhanced the Company's cash position as well as the projected results for the next twelve months, management has concluded that there is sufficient liquidity to mitigate the risk that the Company can continue as a going concern. This is based on the following:

- Strong cash position which will provide a cushion in the event that actual results fall short of projections.
- Continued revenue and market share growth.
- Expansion to a business model that includes diversified revenue streams.
- Availability of additional funding from the current lender as well as an equipment financing option to build the equities exchange.

In the event that these steps are not effective and there is a liquidity shortfall, management has other contingency plans and options that are available that would include reducing costs, raising additional capital or expanding current refinancing. There can be no assurance as to the availability or terms upon which such financing and capital might be available.

## **2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

### **Basis of Presentation**

The accompanying financial statements have been prepared in accordance with accounting principles generally accepted in the United States ("US GAAP").

### **Use of Estimates**

The preparation of financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements, and the reported amounts of expenses during the reporting period. Actual results could differ from those estimates.

### **Cash and Cash Equivalents**

All highly liquid investments purchased with an original maturity of three months or less are considered cash equivalents.

The Company periodically maintains cash balances at financial institutions in excess of the \$250,000 Federal Deposit Insurance Corporation insurance limit. As of December 31, 2018 and 2017, cash and cash equivalents were held at major financial institutions. Cash and cash equivalents approximate fair value. It is the Company's policy to monitor the credit standing of the financial institutions with which it conducts business.

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**Prepaid Expenses**

Prepaid expenses primarily consist of prepaid software maintenance fees and insurance which are amortized over the respective periods.

**Accounts Receivable**

Accounts receivable consists primarily of transaction, access and regulatory fees and the Company's share of distributable revenue receivable from the Options Price Reporting Authority ("OPRA"). Accounts receivable are primarily collected through the Options Clearing Corporation ("OCC") and are with large, highly-rated clearing firms; therefore concentrations of credit risk are limited. The Company has no financing related receivables.

**Fixed Assets**

Fixed assets are recorded at cost. Depreciation is computed on a straight-line basis over the estimated useful lives of the related assets ranging from three to five years. Fixed assets acquired under capital leases are depreciated over the life of the lease. Leasehold improvements are amortized over the estimated useful lives of the improvements or the remaining terms of the leases, whichever is less. Any gain or loss on the retirement of assets is recognized currently.

Depreciable assets are only evaluated for impairment upon a significant change in the operating or macroeconomic environment. In these circumstances, if an evaluation of the undiscounted cash flows indicates impairment, the asset is written down to its estimated fair value, which is based on discounted future cash flows. Useful lives are periodically evaluated to determine whether events or circumstances have occurred that indicate the need for revision.

**Computer Software Developed or Obtained for Internal Use**

The Company follows the provisions of ASC 350, Intangibles - Goodwill and Other ("ASC 350"). The Company capitalizes costs of internally developed software incurred during the application development stage, which includes design, coding, installation and testing activities. The Company amortizes these costs over the period to which benefit is provided.

**Other Assets**

Other assets are comprised of the cost of various trade memberships and deferred charges.

**Due to Miami International Holdings, Inc.**

The majority of all Company expenditures to date have been funded by the Parent. The Due to MIH balance represents the combination of allocated costs from current and prior years as well as the liability for allocated net assets.

**MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC**  
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Management has determined that substantially all costs, other than direct financing and other financing related costs, for the build out of a marketplace and facility for the trading of equity options, are primarily attributable to the Company, PEARL and EMERALD. The Company's allocated portion of costs is included in the accompanying statements of operations and member's deficit. While equipment leasing costs are allocated to MIAX, PEARL and EMERALD all other financing and capital raising costs are not allocated to the subsidiaries and are reflected solely in the Parent company financial statements. The Company considers changes in Due to MIH to be financing activity for purposes of the statements of cash flows.

**Marketing Fees**

The Company facilitates the collection of marketing fees charged to market makers on certain customer trades executed at MIAX. These funds are accumulated in pools that are disbursed by the Company to order flow providers in accordance with instructions received from the market makers who are responsible for the pools. Pursuant to ASC 605-45, Revenue Recognition - Principal Agent Considerations, the Company reflects the assessments and payments on a net basis, with no impact on revenues or expenses. As of December 31, 2017 and 2016, amounts assessed by the Company on behalf of others are included in current assets and payments due to others included in current liabilities.

**Revenue Recognition**

The Company's revenue recognition policies comply with ASC 605, Revenue Recognition ("ASC 605"). Revenue will be recognized when all of the following criteria are met: (1) persuasive evidence that an arrangement exists; (2) delivery has occurred or services have been rendered; (3) the seller's price to the buyer is fixed and determinable; and (4) collectability is reasonably assured. Revenue recognition policies for specific sources of revenue are discussed below:

*Transaction Fees:* Transaction fees are a function of three variables: (1) exchange fee rates; (2) overall industry trading volume; and (3) market share achieved by MIAX. Transaction fees are assessed on a per contract basis and are considered earned upon the execution of a trade and are recognized on a trade date basis. Transaction fees are recorded net of applicable volume discounts.

Rebates paid for certain customer transactions are recorded separately as a cost of revenue. In the event that member firms prepay for transaction fees, revenue is recognized as transaction fees are incurred.

*Access Fees:* Access fees represent fees assessed to MIAX members for the opportunity to trade and use other related functions of MIAX, including trading permits and connectivity. Access fees are recognized during the period the service is provided.

*Market Data Fees:* Market data revenue includes distributions from MIAX's participation in OPRA and is distributed based upon each individual exchange's market share of total options contracts cleared by the OCC. Market data revenue also includes MIAX's market data revenue earned from the sale of MIAX's Top of the Market ("TOM") data. Market data revenue is recognized in the period the data is provided.

# MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC

## Notes to Financial Statements

### December 31, 2018 and 2017

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*Regulatory Fees:* Regulatory fees include the Options Regulatory Fee (“ORF”) and Section 31 fees. ORF is based on the number of customer contracts, as reported by OCC, executed or cleared by MIAX members on all US options exchanges and is recognized on a trade date basis. Section 31 fees of \$3,612,996 are also included in regulatory fees and are charged to MIAX members. Section 31 fees are used to offset similar fees charged to MIAX by the SEC which are included in trading operations costs.

*Deferred Transaction Revenue:* The Company has classified amounts totaling \$1,072,938 representing prepaid MIAX fees (see Note 7 – Equity Rights Offering III) as deferred revenue at December 31, 2017. Deferred revenue is amortized to income over the applicable future periods as transaction fees are earned.

#### **Income Taxes**

MIAX is a single member limited liability company and was structured as a disregarded entity for U.S. federal, state and local income tax purposes. Accordingly, no provision for income taxes is made in MIAX’s financial statements.

#### **Recent Accounting Pronouncements**

In May 2014, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2014-09, Revenue for Contracts with Customers (Topic 606). Upon the effective date, the ASU replaces almost all existing revenue recognition guidance, including industry specific guidance, in US GAAP. The standard provides a five-step analysis of transactions to determine when and how revenue is recognized, based upon the core principle that revenue is recognized to depict the transfer of goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In addition, the standard requires additional disclosures regarding the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. In August 2015, the FASB subsequently issued ASU 2015-14, Revenue from Contracts with Customers - Deferral of the Effective Date that resulted in a one year deferral of ASU 2014-09 for fiscal years beginning after December 15, 2018.

Early adoption is permitted for fiscal years beginning after December 15, 2016. The Company is currently evaluating the impact of the adoption of this standard on its financial statements but does not expect it to have a material impact, if any.

In February 2016, the FASB issued ASU 2016-02, which describes the principles for the recognition, measurement, presentation and disclosure of leases for both parties of the contract (both lessees and lessors). The new standard requires classifying leases as either finance or operating leases and will determine whether lease expense is recognized based on an effective interest method or on a straight line basis over the term of the lease, respectively. Regardless of the classification, a lessee is also required to record a right-of-use asset and a lease liability for all leases with a term of greater than 12 months. This guidance is effective for reporting periods beginning after December 15, 2019, however early adoption is permitted. Entities are required to use a modified retrospective approach for leases that exist or are entered into after the beginning of the earliest comparative period in the financial statements. The Company is currently evaluating the impact that ASU 2016-02 will have on its consolidated financial statements.

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**3. FIXED ASSETS**

The Company's allocation of fixed assets is comprised of the following:

	<u>2018</u>	<u>2017</u>
Furniture and equipment	\$ 30,192,333	\$ 29,799,536
Software	<u>1,349,834</u>	<u>1,320,152</u>
	31,542,167	31,119,688
Less - accumulated depreciation and amortization	<u>29,595,754</u>	<u>27,074,535</u>
	<u>1,946,413</u>	<u>4,045,153</u>
Capitalized internally developed software in-progress	<u>1,949,416</u>	<u>1,819,711</u>
	<u>\$ 3,895,829</u>	<u>\$ 5,864,864</u>

Depreciation expense for the years ended December 31, 2018 and 2017 was \$2,521,218 and \$2,412,228, respectively. Substantially all of the assets are pledged as described in Note 6.

**4. INTERNALLY DEVELOPED SOFTWARE**

The Company capitalized \$8,673,639 and \$9,554,881 of development costs, net of amortization as of December 31, 2018 and 2017, respectively. Amortization expense of \$3,658,288 and \$4,973,940 was recorded in 2018 and 2017, respectively.

Future amortization of internally developed software is as follows:

**Years Ending December 31,**

2019	\$ 3,264,210
2020	2,540,265
2021	1,894,941
2022	787,668
2023	<u>186,555</u>
	<u>\$ 8,673,639</u>

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**5. COMMITMENTS AND CONTINGENCIES**

**Operating Leases**

The Parent leases space for its Princeton, New Jersey office under various operating lease agreements. The leases are for approximately 30,761 square feet (the "Princeton Premises"), originally expiring in May 31, 2020.

In April 2017, the Parent entered into an amendment for the lease for the Princeton Premises for an additional 18,550 square feet of office space for a term commencing on May 1, 2017 through March 31, 2026. The additional space will allow for the expansion of business activities.

In April 2017, the Parent additionally entered into a sublease for approximately 7,000 square feet used as a gym space in the same building as the Princeton Premises ("Fitness Center"). The lease term for the Fitness Center commenced on May 1, 2017 and continues through March 31, 2022

**Claims and Litigation**

On September 1, 2017, Nasdaq, Inc., Nasdaq ISE, LLC and FTEN, INC, (collectively, "Nasdaq") filed an action (Civil Action No. 3:17-CV-06664) against Miami International Holdings, Inc., Miami International Securities Exchange, LLC, MIAX PEARL, LLC and Miami International Technologies, LLC (collectively, "MIH") in the U.S. District Court for the District of New Jersey. The Complaint alleges patent infringement and trade secret misappropriation relating to Nasdaq's electronic trading technology and platforms. MIH engaged outside counsel Fish & Richardson LLP and Reed Smith LLP to represent it in this action.

On December 4, 2017, MIH filed a motion to dismiss the claims against it. Nasdaq responded with an opposition to MIH's motion on January 15, 2018. MIH filed its reply in support of the motion to dismiss on January 29, 2018. The Court then set a hearing on the motion to dismiss for April 17, 2018, and also directed that the parties engage in a settlement conference at that time. Subsequently, counsel for Nasdaq filed a motion to disqualify Fish & Richardson as counsel for the Company and the motion to dismiss has been postponed until after the Court decides this issue. MIH intends to continue to defend itself vigorously in this matter. In September, 2018 Nasdaq's motion to disqualify Fish & Richardson as counsel for the trade secrets and claims related to 3 of the patents was granted. The Parent's appeal of this disqualification was denied in November, 2018. In March and April, 2018 the Parent filed seven petitions for Covered Business Method Review ("CMBR") before the Patent Trial and Appeal Board at the United States Patent and Trademark Office ("USPTO") Each petition seeks a determination that the subject patent is invalid under the current law. Final ruling on these petitions is expected in October and November of 2019. In the interim, Nasdaq withdrew its claims on one of the seven patents, leaving the remaining six to be evaluated by USPTO. On December, 3, 2018 the Parent motion to stay the entire litigation pending the outcome at the USPTO was granted in full.

In the normal course of its business, the Company is exposed to asserted and unasserted claims. In the opinion of management, these matters will not have a material adverse effect on the Company's financial position, results of operations or cash flows.

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**Employees and Directors**

The Parent has entered into employment agreements with certain employees. In addition to base salaries, the agreements provide for issuance of stock options, retention and, in part, incentive bonuses based on criteria established by the Board of Directors.

**6. DEBT OBLIGATIONS**

In June 2016, the Parent entered into a loan agreement with a lender to borrow \$30 million with a 5-year maturity at an interest rate that is 12.5% above LIBOR, which is set at a minimum of 1%. The initial rate of 13.5% was evaluated on a quarterly basis and adjusted for fluctuations in the LIBOR rate. In conjunction with the loan, the lender was granted a first priority lien against all of the assets of the Company. These assets include deposit accounts, documents, equipment, fixtures and improvements, general intangibles and intellectual property.

On December 31, 2018 the Parent borrowed an additional \$5 million from the lender and at the same time negotiated a postponement of the first scheduled semi-annual principal repayment of \$6 million, which was also due on that date.

The allocated debt obligations of the Company at December 31, 2018 and 2017 were \$130,133 and \$159,859, respectively which represented the remaining balance of a financing arrangement for annual insurance premiums and are included in Current Debt.

**Lease Agreements**

During 2011, MIAX entered into a Master Lease Agreement (the "Lease Agreement") with a vendor. Pursuant to the Lease Agreement, the vendor provided MIAX with an aggregate amount of \$19,328,892 in equipment financing. The interest rate under the Lease Agreement was 6.67% for a term of 48 months. In September, 2014 the Lease Agreement was amended to extend the maturity of the lease for an additional 18 months, maturing in August, 2017. The Amendment included an increase in the interest rate to 8.00% and provided the Lessor with a security interest by pledging the other assets of the Company. The Company considered subsequent measurement of the changes in the provisions of a capital lease and determined that no adjustment was required in the financial statements.

In November 2015, the Company entered into two additional subleases under the amended Master Lease agreement with the vendor and leased equipment valued at \$1,464,567 for a 23-month term and at \$206,716 for a 22-month term. Both subleases carry an interest rate of 15% and were accounted for as capital leases. In January 2016 the Parent entered into additional subleases with the same vendor for \$1.5 million of equipment at similar terms to provide two subleases.

In November 2017, the Parent entered into two additional subleases with the same vendor and leased equipment valued at \$2,284,718 for a 36-month term. Both subleases carry an interest rate of 9.57% and were accounted for as capital leases. The Company was allocated \$1,436,948 of this equipment lease.

In June 2018, the Parent entered into an additional sublease with the same vendor and leased equipment valued at \$2,117,897 for a 36-month term. In July 2018, the Parent entered into another sublease with the vendor and leased equipment valued at \$140,789 for a 36-month term.

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Both subleases carry an interest rate of 9.7% and were accounted for as capital leases. The Company was allocated \$76,878 of these equipment leases.

In April 2016, the Parent entered into an equipment lease with one of its vendors for equipment valued at \$2,356,524 for a 24-month term. The lease carries an interest rate of 12%. The Company was allocated \$682,261 of this equipment lease. That same month the Company entered into another equipment lease with a leasing company for equipment valued at \$1,160,191 for a 48-month term at an interest rate of 14.74%. The Company was allocated \$282,748 of this equipment lease. Both leases were accounted for as capital leases.

Allocated obligations under all capital leases at December 31, 2018 and 2017 were \$1,123,439 and \$1,748,395, respectively. The accumulated amortization for all capital leases at December 31, 2018 and 2017 were \$22,476,378 and \$21,235,455, respectively.

Future minimum lease payments under these obligations at December 31, 2018 are:

**Years Ending December 31,**

2019	\$ 672,459
2020	541,069
2021	<u>12,578</u>
Total future payments	1,226,106
Less interest	<u>102,667</u>
Net capital lease liability	<u>\$ 1,123,439</u>

**7. EQUITY**

MIAX is a single member limited liability company and has issued 100 membership units constituting 100% membership interest in the Company to MIH who is the Company's sole member. MIAX has not made any distributions for the period from February 27, 2008 (inception) through December 31, 2018.

**Equity Rights Offering I**

As approved by the Board of Directors on September 27, 2013, the Parent authorized the issuance and sale of up to ten A-Units and up to ten B-Units to the members of the MIAX Options Exchange, with such Units having the terms set forth below ("Offering").

Each A-Unit consisted of (i) 101,695 shares (the "Shares") of common stock of the Parent, par value \$0.001 per share and a purchase price of \$5.00 per Share ("Common Stock") and (ii) common stock purchase warrants (the "A-Warrants") to purchase up to 2,182,639 shares of Common Stock.

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Ten percent or 218,264 A-Warrants vested upon closing of the transaction and the remaining 1,964,375 A-Warrants vested over a 22.5 month period provided that the A-Unit Investor met the specific performance criteria set forth in the A-Warrant, which required that the A-Unit Investor trade an agreed-upon number of options contracts, subject to certain exceptions, on MIAX on a daily basis over a specified number of months.

Each B-Unit consisted of common stock purchase warrants (the “B-Warrants”) to purchase 1,713,251 shares of Common Stock. In order to receive B-Warrants, an Investor participating in the B-Unit Offering had to prepay certain MIAX Exchange Fees in the amount of \$500,000 per B-Unit as set forth on the MIAX Options Exchange Fee Schedule (“MIAX Fees”) for the 22-month period commencing October 1, 2013 and ending July 31, 2015 (the “Prepaid Fee Period”).

The 1,713,521 B-Warrants vested commencing upon closing of the transaction up to a 22.5 month period provided that the B-Unit Investor met the specific performance criteria set forth in the B-Warrant, which required that the B-Unit Investor trade an agreed-upon number of options contracts, subject to certain exceptions, on MIAX on a daily basis over a specified number of months.

The A-Warrants and B-Warrants (together, the “Warrants”) have an exercise period commencing upon vesting and expiring on the earlier of (i) August 31, 2020, or (ii) the two-year anniversary of a Qualified Public Offering (an initial public offering of Common Stock under the Securities Act, where the offering price, net of underwriting discounts and commissions, exceeds \$250,000,000), or a merger of the Company with and into an unaffiliated entity or corporation. In the event of a Qualified Public Offering, merger or other liquidating event, it will result in the immediate vesting of all unvested Warrants that remain eligible to vest with the A-Unit Investor and B-Unit Investor (“Investor(s)” or “Offering Participant(s)”).

On September 30, 2013, the Parent entered into strategic alliances with an Investor to acquire one A-Unit and five Investors to acquire eight B-Units. As a result of the two transactions, the Company issued 101,695 shares of Common Stock to the A-Unit Investor described above for \$508,475 and received \$4,000,000 for prepaid MIAX fees from the B-Unit Investors described above.

### **Equity Rights Offering II**

On January 30, 2015, the Parent entered into a second Equity Rights offering with 7 strategic investors to acquire 18 D-Units for a total prepaid fee of \$4,500,000. These D-Units were similar in structure to the B-Units described above with a few notable exceptions. Each D-unit consisted of common stock purchase warrants to purchase 1,353,518 shares of common stock of the Parent and required a prepaid fee of \$250,000 instead of the \$500,000 that was stipulated in the B-Unit deal. The term of the transaction was for the 29-month period commencing February 1, 2015 and ending June 30, 2017.

The basic terms of the second offering were similar to those of the first offering, including the warrant vesting features and the exercise periods.

For the year ended December 31, 2017, the Parent recognized warrant expense of \$17,743,613 representing the fair market value associated with vested warrants due to the Offering Participants meeting their performance criteria in the second Equity Rights offering. This expense was allocated in its entirety to the Company and is included in financing related costs in the statement of operations and member’s deficit.

**MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC**  
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**Equity Rights Offering III**

On June 30, 2017, the Parent entered into a third Equity Rights offering with 8 strategic investors to acquire 20 H-Units for a total prepaid fee of \$10,000,000. Each H-Unit consists of common stock purchase warrants to purchase 414,661 shares of common stock of the Parent and requires a prepaid fee of \$500,000, similar to that of ERP I. The term of the transaction is the 42-month period commencing July 1, 2017 and ending December 31, 2020. The basic terms of the third offering are similar to the first two offerings with the respect to warrant vesting features and exercise periods.

For the years ended December 31, 2018 and 2017, the Parent recognized warrant expense of \$4,428,017 and \$2,432,678, respectively, representing the fair market value associated with vested warrants due to the Offering Participants meeting their performance criteria in the third Equity Rights offering. These expenses were allocated in their entirety to the Company and are included in financing related costs in the statement of operations. Additionally, the Company amortized \$1,072,938 and \$8,927,062 of the prepaid transaction fees to income during the years ended December 31, 2018 and 2017, respectively.

**8. EMPLOYEE BENEFIT PLAN**

The Parent sponsors a voluntary defined contribution 401(k) plan, which covers substantially all of the Company's employees. Neither the Parent nor the Company Contributed to the 401(k) plan in 2018 or 2017.

**9. DIRECTORS FEES**

In April 2013, the Board of Directors of the Company approved the compensation amounts to be paid to Independent Directors and Committee Members of the Company for the period beginning January 1, 2013 until such time as the Board determines it is in the best interests of the Company to adopt new compensation terms (the "Director & Committee Fee Compensation"). Independent Directors and Committee Members of the Company are compensated as follows:

Independent Directors each receive \$50,000 for the year, pro rata. Committee Members each receive varying amounts, pro rata, depending on which committee(s) such Committee Member is appointed. The Director & Committee Fee Compensation is payable pursuant to the following two options: (i) a maximum of 50% cash payable quarterly and the balance in stock options to purchase Nonvoting Common Stock of the Company under the 2013 Stock Option and Incentive Plan for Non-Employee Directors, Committee Members and Members of the Board of Advisors (the "2013 Stock Option and Incentive Plan"), valued at the grant date, vesting quarterly and having a term of 10 years; or (ii) taking 100% of the Director & Committee Fee Compensation in Nonvoting Common Stock options under the 2013 Stock Option and Incentive Plan, valued at the grant date and vesting quarterly.

The number of options to be granted to Independent Directors is based the Director & Committee Fee Compensation divided by the value of each option under a theoretical valuation, and the exercise price applicable to each option is the fair market value ("FMV") at the time of the grant.

Additionally, an Independent Director (not a Committee Member) receives \$20,000 in value of Nonvoting Common Stock options under the 2013 Stock Option and Incentive Plan annually, commencing in the

**MIAMI INTERNATIONAL SECURITIES EXCHANGE, LLC**  
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calendar year following his/her first year of board service, vesting quarterly and having a term of 10 years. The same theoretical valuation discussed above would be used to determine how many options would be granted to the Independent Director annually.

Additionally, a new Independent Director only (not a Committee Member), upon first appointment to the Board of Directors or the board of a subsidiary of the Company, will receive a grant of 50,000 Nonvoting Common Stock options under 2013 Stock Option and Incentive Plan that will fully vest after 9 months of service as a director to the Company with the exercise price being FMV on the grant date and having a term of 10 years.

**10. SUBSEQUENT EVENTS**

The Company has evaluated the possibility of subsequent events existing in the Company's financial statements through June 26, 2019, the date the financial statements were available to be issued. The Company has determined that there are no material events that would require disclosure in the Company's financial statements other than those listed below and elsewhere in these financial statement.

**Debt Issuances**

Since January 1, 2019, the Parent has received long-term loan proceeds of \$2,000,000, representing an additional drawdown on the loan described in Note 6. In April, 2019 the Parent refinanced the loan with the same lender for a new principal amount of \$77 million in connection with the 2019 Loan Transaction. The new loan has a 5-year term maturing on April 26, 2024 with a fixed interest rate of 13.75%.

**Sale of NOLs**

Since January 1, 2019, the Parent has received proceeds from the sale of its 2016 and 2017 New Jersey NOLs of \$2,006,887.



Financial Statements and Report of  
Independent Certified Public Accountants

**MIAX Emerald, LLC**

December 31, 2018

# MIAX Emerald, LLC

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## REPORT OF INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS

### Board of Directors MIAX Emerald, LLC

We have audited the accompanying financial statements of MIAX Emerald, LLC (the “Company”), which comprise the balance sheet as of December 31, 2018 and the related statements of operations and member’s deficit, and cash flows for the period from January 30, 2018 (inception) to December 31, 2018, and the related notes to the financial statements.

#### Management's responsibility for the financial statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

#### Auditor's responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor’s judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity’s preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity’s internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of MIAX Emerald, LLC as of December 31, 2018, and the results of its operations and its cash flows for the period from January 30, 2018 (inception) to December 31, 2018 in accordance with accounting principles generally accepted in the United States of America.

*Grant Thornton LLP*

New York, New York  
June 26, 2019

**MIAX Emerald, LLC**  
**Balance Sheet**  
**December 31, 2018**

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**ASSETS**

**CURRENT ASSETS**

Cash and cash equivalents	\$ -
Prepaid and other current assets	<u>725,414</u>
Total current assets	725,414
Fixed assets, net of depreciation and amortization	5,460,508
Other assets	<u>1,158,724</u>
Total assets	<u>\$ 7,344,646</u>

**LIABILITIES AND MEMBER'S EQUITY**

**CURRENT LIABILITIES**

Accounts payable and other liabilities	\$ 1,515,430
Accrued compensation payable	1,721,674
Current debt	<u>766,022</u>
Total current liabilities	4,003,126
Due to Miami International Holdings, Inc.	15,851,164
Long term debt	<u>1,073,705</u>
Total liabilities	20,927,995

**Commitments and Contingencies (Note 4)**

**DEFICIT IN MEMBER'S EQUITY**

Accumulated losses	<u>(13,583,349)</u>
Total member's deficit	<u>(13,583,349)</u>
Total liabilities and deficit in member's equity	<u>\$ 7,344,646</u>

*The accompanying notes are an integral part of these financial statements.*

**MIAX Emerald, LLC**  
**Statement of Operations and Member's Deficit**  
**January 30, 2018 (inception) to December 31, 2018**

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REVENUES	
Other revenue	\$ <u>-</u>
Total revenues	-
OPERATING EXPENSES INCURRED DIRECTLY OR ALLOCATED FROM PARENT	
Employee compensation and benefits	10,193,837
Information technology and communication costs	1,154,450
Depreciation and amortization	616,785
Occupancy costs	732,720
Professional services	2,310
Financial and banking consulting services	13,862
Trading operations costs	16,105
Share based compensation to third parties	521
Directors' fees	256,760
Other	<u>483,281</u>
Total operating expenses	<u>13,470,631</u>
OPERATING LOSS	<u>(13,470,631)</u>
Interest expense	<u>(112,718)</u>
LOSS BEFORE INCOME TAX AND NET LOSS	<u>(13,583,349)</u>
Member's deficit at beginning of year	<u>-</u>
Member's deficit at end of year	<u>\$ (13,583,349)</u>

*The accompanying notes are an integral part of these financial statements.*

**MIAX Emerald, LLC**  
**Statement of Cash Flows**  
**January 30, 2018 (inception) to December 31, 2018**

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<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>	
Net loss	\$ (13,583,349)
Depreciation and amortization	616,785
Adjustments to reconcile net loss to net cash used in operating activities	
Changes in operating assets and liabilities	
Prepaid and other current assets	(725,414)
Other assets	(1,158,724)
Accounts payable and other liabilities	1,515,430
Accrued compensation payable	<u>1,721,674</u>
Net cash used in operating activities	<u>(11,613,598)</u>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>	
Capital expenditures	<u>(3,972,363)</u>
Net cash used in investing activities	<u>(3,972,363)</u>
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>	
Proceeds from debt	94,477
Repayments of term debt	(359,680)
Due to Miami International Holdings, Inc.	<u>15,851,164</u>
Net cash provided by financing activities	<u>15,585,961</u>
Increase (decrease) in cash and cash equivalents	-
Cash and cash equivalents at beginning of year	<u>\$ -</u>
Cash and cash equivalents at end of year	<u>\$ -</u>
Cash paid during the year for interest	<u>\$ 112,718</u>
<b>Non-cash investing activities</b>	
Assets acquired under capital leases	\$ 2,104,930
Non-cash amount related to capitalized internally developed software	<u>198,807</u>
Total non-cash investing activities	<u>\$ 2,303,737</u>

*The accompanying notes are an integral part of these financial statements.*

**MIAX Emerald, LLC**  
**Notes to Financial Statements**  
**December 31, 2018**

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**1. ORGANIZATION AND OPERATIONS**

MIAX Emerald, LLC (“Emerald” or the “Company”) a third options exchange with a hybrid market model was formed in the State of Delaware on January 30, 2018 and is a wholly-owned subsidiary of Miami International Holdings, Inc. (the “Parent” or “MIH”), and an affiliate of Miami International Securities Exchange, LLC (“MIAX”), MIAX PEARL, LLC (“PEARL”), Miami International Technologies, LLC (“MIAX Technologies”), Miami International Futures Exchange, LLC (“MIAX Futures”) (collectively “MIH” or the “Company”) and MIAX Global, LLC, which was formed on June 30, 2015. MIAX provides a marketplace and facilities for the trading of options products for its members and employs a pro-rata market model. PEARL, a second equity options exchange which launched on February 6, 2017 was formed to provide a marketplace for a different market model, the price-time priority model. MIAX Futures intends to provide a marketplace and facilities for the trading of futures products for its members, but is currently inactive. MIAX Technologies will sell or license trading technology. MIAX Global focuses on merger, acquisition and joint venture activities of MIH.

Due to the fact that the Company has incurred a cumulative loss of approximately \$13 million from January 30, 2018 (date of inception) to December 31, 2018, substantial doubt was raised in the past about the Company’s ability to continue as a going concern. These periodic shortfalls were covered through capital raises and short-term borrowing but the Company’s continuation as a going concern was dependent on its ability to obtain this additional financing.

In an effort to address the conditions and events that gave rise to this situation, management implemented a plan that included a refinancing with its current lender which has provided a substantial cash surplus for the next 12-24 month period. This new loan agreement for \$77 million (of which approximately \$43 million was utilized to repay the outstanding debt with the same lender), is described in more detail in Note 12. To further ensure that the three exchange subsidiaries adequately fund their operations and fulfill their obligations, the parent company, MIH has executed separate funding agreements with MIAX, PEARL and Emerald which provide for seed capital and guarantee ongoing financial support.

Based on the developments outlined above which have substantially enhanced the Company’s cash position as well as the projected results for the next twelve months, management has concluded that there is sufficient liquidity to mitigate the risk that the Company can continue as a going concern. This is based on the following:

- Strong cash position which will provide a cushion in the event that actual results fall short of projections.
- Continued revenue and market share growth.
- Expansion to a business model that includes diversified revenue streams.
- Availability of additional funding from the current lender as well as an equipment financing option to build the equities exchange.

In the event that these steps are not effective and there is a liquidity shortfall, management has other contingency plans and options that are available that would include reducing costs, raising additional capital or expanding current refinancing. There can be no assurance as to the availability or terms upon which such financing and capital might be available.

## **2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

### **Basis of Presentation**

The accompanying financial statements have been prepared in accordance with accounting principles generally accepted in the United States (“US GAAP”).

### **Use of Estimates**

The preparation of financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements, and the reported amounts of expenses during the reporting period. Actual results could differ from those estimates.

### **Cash and Cash Equivalents**

All highly liquid investments purchased with an original maturity of three months or less are considered cash equivalents.

The Company periodically maintains cash balances at financial institutions in excess of the \$250,000 Federal Deposit Insurance Corporation insurance limit. It is the Company’s policy to monitor the credit standing of the financial institutions with which it conducts business.

### **Prepaid Expenses**

Prepaid expenses primarily consist of prepaid software maintenance fees.

### **Fixed Assets**

Fixed assets are recorded at cost. Depreciation is computed on a straight-line basis over the estimated useful lives of the related assets ranging from three to five years. Fixed assets acquired under capital leases are depreciated over the life of the lease. Leasehold improvements are amortized over the estimated useful lives of the improvements or the remaining terms of the leases, whichever is less. Any gain or loss on the retirement of assets is recognized currently.

Depreciable assets are only evaluated for impairment upon a significant change in the operating or macroeconomic environment. In these circumstances, if an evaluation of the undiscounted cash flows indicates impairment, the asset is written down to its estimated fair value, which is based on discounted future cash flows. Useful lives are periodically evaluated to determine whether events or circumstances have occurred that indicate the need for revision.

### **Computer Software Developed or Obtained for Internal Use**

The Company follows the provisions of ASC 350, Intangibles - Goodwill and Other (“ASC 350”). The Company capitalizes costs of internally developed software incurred during the application development stage, which includes design, coding, installation and testing activities. The Company amortizes these costs over the period to which benefit is provided.

**MIAX Emerald, LLC**  
**Notes to Financial Statements**  
**December 31, 2018**

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**Other Assets**

Other assets primarily consist of long-term membership and participation fees paid to industry associations.

**Due to Miami International Holdings, Inc.**

All of the Company's expenditures to date have been funded by the Parent. The Due to MIH balance represents the combination of allocated costs for the current period as well as the liability for allocated net assets.

Management has determined that substantially all costs, other than direct financing and other financing related costs, for the build out of a marketplace and facility for the trading of equity options, are primarily attributable to the Company, MIAX and PEARL. The Company's allocated portion of cost are included in the accompanying statement of operations and member's deficits. While equipment leasing costs are allocated to MIAX, PEARL and Emerald, all other financing and capital raising costs are not allocated to the subsidiaries and are reflected solely in the Parent company financial statements. The Company considers changes to Due to MIH to be financing activity for purposes of the Statement of Cash Flows.

**Income Taxes**

Emerald is a single member limited liability company and was structured as a disregarded entity for U.S. federal, state and local income tax purposes. Accordingly, no provision for income taxes is made in Emerald's financial statements.

**Recent Accounting Pronouncements**

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2014-09, Revenue for Contracts with Customers (Topic 606). Upon the effective date, the ASU replaces almost all existing revenue recognition guidance, including industry specific guidance, in US GAAP. The standard provides a five-step analysis of transactions to determine when and how revenue is recognized, based upon the core principle that revenue is recognized to depict the transfer of goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In addition, the standard requires additional disclosures regarding the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. In August 2015, the FASB subsequently issued ASU 2015-14, Revenue from Contracts with Customers - Deferral of the Effective Date that resulted in a one year deferral of ASU 2014-09 for fiscal years beginning after December 15, 2018. Early adoption is permitted for fiscal years beginning after December 15, 2016. The Company is currently evaluating the impact of the adoption of this standard on its financial statements but does not expect it to have a material impact, if any.

In February 2016, the FASB issued ASU 2016-02, which describes the principles for the recognition, measurement, presentation and disclosure of leases for both parties of the contract (both lessees and lessors). The new standard requires classifying leases as either finance or operating leases and will determine whether lease expense is recognized based on an effective interest method or on a straight line basis over the term of the lease, respectively. Regardless of the classification, a lessee is also required to record a right-of-use asset and a lease liability for all leases with a term of greater than 12 months.

**MIAX Emerald, LLC**  
**Notes to Financial Statements**  
**December 31, 2018**

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This guidance is effective for reporting periods beginning after December 15, 2019, however early adoption is permitted. Entities are required to use a modified retrospective approach for leases that exist or are entered into after the beginning of the earliest comparative period in the financial statements. The Company is currently evaluating the impact that ASU 2016-02 will have on its consolidated financial statements.

**3. FIXED ASSETS**

The Company's allocation of fixed assets is comprised of the following as of December 31, 2018:

	<u>2018</u>
Furniture and equipment	\$ 3,435,163
Purchased software	<u>136,506</u>
	3,571,669
Less - accumulated depreciation and amortization	616,785
Capitalized internally developed software in-progress	<u>2,505,624</u>
	<u>\$ 5,460,508</u>

**4. COMMITMENTS AND CONTINGENCIES**

**Operating Leases**

The Parent leases space for its Princeton, New Jersey office under various operating lease agreements. The leases are for approximately 30,761 square feet (the "Princeton Premises") and continue through May 31, 2020.

In April 2017, the Parent entered into an amendment for the lease for the Princeton Premises for an additional 18,550 square feet of office space for a term commencing on May 1, 2017 through March 31, 2026. The additional space will allow for the expansion of business activities.

In April 2017, the Parent additionally entered into a sublease for approximately 7,000 square feet used as a gym space in the same building as the Princeton Premises ("Fitness Center"). The lease term for the Fitness Center commenced on May 1, 2017 and continues through March 31, 2022.

**Claims and Litigation**

On September 1, 2017, Nasdaq, Inc., Nasdaq ISE, LLC and FTEN, INC, (collectively, "Nasdaq") filed an action (Civil Action No. 3:17-CV-06664) against Miami International Holdings, Inc., Miami International Securities Exchange, LLC, MIAX PEARL, LLC and Miami International Technologies, LLC (collectively, "MIH") in the U.S. District Court for the District of New Jersey.

**MIAX Emerald, LLC**  
**Notes to Financial Statements**  
**December 31, 2018**

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The Complaint alleges patent infringement and trade secret misappropriation relating to Nasdaq's electronic trading technology and platforms. MIH engaged outside counsel Fish & Richardson LLP and Reed Smith LLP to represent it in this action.

On December 4, 2017, MIH filed a motion to dismiss the claims against it. Nasdaq responded with an opposition to MIH's motion on January 15, 2018. MIH filed its reply in support of the motion to dismiss on January 29, 2018. The Court then set a hearing on the motion to dismiss for April 17, 2018, and also directed that the parties engage in a settlement conference at that time. Subsequently, counsel for Nasdaq filed a motion to disqualify Fish & Richardson as counsel for the Company and the motion to dismiss has been postponed until after the Court decides this issue. MIH intends to continue to defend itself vigorously in this matter. In September, 2018 Nasdaq's motion to disqualify Fish & Richardson as counsel for the trade secrets and claims related to 3 of the patents was granted. The Parent's appeal of this disqualification was denied in November, 2018. In March and April, 2018 the Parent filed seven petitions for Covered Business Method Review ("CMBR") before the Patent Trial and Appeal Board at the United States Patent and Trademark Office ("USPTO") Each petition seeks a determination that the subject patent is invalid under the current law. Final ruling on these petitions is expected in October and November of 2019. In the interim, Nasdaq withdrew its claims on one of the seven patents, leaving the remaining six to be evaluated by USPTO. On December, 3, 2018 the Parent motion to stay the entire litigation pending the outcome at the USPTO was granted in full.

In the normal course of its business, the Company is exposed to asserted and unasserted claims. In the opinion of management, these matters will not have a material adverse effect on the Company's financial position, results of operations or cash flows.

**Employees and Directors**

The Parent has entered into employment agreements with certain employees. In addition to base salaries, the agreements provide for issuance of stock options, retention and, in part, incentive bonuses based on criteria established by the Board of Directors.

**5. DEBT AND CAPITAL LEASE OBLIGATIONS**

In June 2016, the Parent entered into a loan agreement with a lender to borrow \$30 million with a 5-year maturity at an interest rate that is 12.5% above LIBOR, which is set at a minimum of 1%. The initial rate of 13.5% was evaluated on a quarterly basis and adjusted for fluctuations in the LIBOR rate. In conjunction with the loan, the lender was granted a first priority lien against all of the assets of the Company. These assets include deposit accounts, documents, equipment, fixtures and improvements, general intangibles and intellectual property.

On December 31, 2018 the Parent borrowed an additional \$5 million from the lender and at the same time negotiated a postponement of the first scheduled semi-annual principal repayment of \$6 million, which was also due on that date.

The allocated debt obligations of the Company at December 31, 2018 was \$94,477 which represented the remaining balance of a financing arrangement for annual insurance premiums.

**MIAX Emerald, LLC**  
**Notes to Financial Statements**  
**December 31, 2018**

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In June 2018, the Parent entered into a sublease with an existing vendor and leased equipment valued at \$2,117,897 for a 36-month term. In July 2018, the Parent entered into another sublease with the vendor and leased equipment valued at \$140,789 for a 36-month term. Both subleases carry an interest rate of 9.7% and were accounted for as capital leases. The Company was allocated \$2,104,930 of these equipment leases.

Obligations under all capital leases at December 31, 2018 was \$1,745,250. The accumulated amortization for all capital leases at December 31, 2018 was \$405,647.

Future minimum lease payments under these obligations at December 31, 2018 are:

**Years Ending December 31,**

2019	\$	816,377
2020		816,377
2021		<u>344,397</u>
Total future payments		1,977,151
Less interest		<u>231,901</u>
Net capital lease liability	\$	<u>1,745,250</u>

**6. EQUITY**

Emerald is a single member limited liability company and has issued 100 membership units constituting 100% membership interest in the Company to MIH who is the Company's sole member. Emerald has not made any distributions for the period from January 30, 2018 (inception) through December 31, 2018.

**7. EMPLOYEE BENEFIT PLAN**

The Parent sponsors a voluntary defined contribution 401(k) plan, which covers substantially all of the Company's employees. Neither the Parent nor the Company contributed to the 401(k) plan.

**8. DIRECTORS FEES**

**Directors Fees**

The Board of Directors of the Company approved the compensation amounts to be paid to Independent Directors and Committee Members of the Company for the period beginning July 1, 2018 until such time as the Board determines it is in the best interests of the Company to adopt new compensation terms (the "Director & Committee Fee Compensation"). Independent Directors and Committee Members of the Company are compensated as follows:

**MIAX Emerald, LLC**  
**Notes to Financial Statements**  
**December 31, 2018**

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Independent Directors and Committee Members of Emerald who also serve in the same capacity for another MIH Self-Regulatory Organization (“SRO”) subsidiary each shall receive a rate of one-half of such compensation paid by the Company SRO subsidiary for the year, pro rata. Independent Directors serving in a sole capacity for Emerald, each receive \$50,000 for the year, pro rata. Committee Members each receive varying amounts, pro rata, depending on which committee(s) such Committee Member is appointed. The Director & Committee Fee Compensation is payable pursuant to the following two options: (i) a maximum of 50% cash payable quarterly and the balance in stock options to purchase Nonvoting Common Stock of the Company under the 2013 Stock Option and Incentive Plan for Non-Employee Directors, Committee Members and Members of the Board of Advisors (the “2013 Stock Option and Incentive Plan”), valued at the grant date, generally vesting quarterly and having a term of 10 years; or (ii) taking 100% of the Director & Committee Fee Compensation in Nonvoting Common Stock options under the 2013 Stock Option and Incentive Plan, valued at the grant date and generally vesting quarterly.

The number of options to be granted to Independent Directors is based the Director & Committee Fee Compensation divided by the value of each option under a theoretical valuation, and the exercise price applicable to each option is the fair market value (“FMV”) at the time of the grant.

Additionally, an Independent Director (not a Committee Member) serving in a sole capacity for the Company receives \$20,000 in value of Nonvoting Common Stock options and an Independent Director (not a Committee Member) who also serves in the same capacity for another Company SRO subsidiary shall receive \$10,000 in value of Nonvoting Common Stock option paid by the Company SRO subsidiary under the 2013 Stock Option and Incentive Plan annually, commencing in the calendar year following his/her first year of board service, vesting quarterly and having a term of 10 years. The same theoretical valuation discussed above would be used to determine how many options would be granted to the Independent Director annually.

Additionally, a new Independent Director only (not a Committee Member) serving in a sole capacity for the Company, upon first appointment to the Board of Directors or the board of a subsidiary of the Company, will receive a grant of 50,000 Nonvoting Common Stock options under 2013 Stock Option and Incentive Plan that will fully vest after 9 months of service as a director to the Company with the exercise price being FMV on the grant date and having a term of 10 years.

## **9. SUBSEQUENT EVENTS**

The Company has evaluated the possibility of subsequent events existing in the Company’s financial statements through June 26, 2019, the date the financial statements were available to be issued. The Company has determined that there are no material events that would require disclosure in the Company’s financial statements other than those listed below and elsewhere in these financial statement footnotes.

### **Emerald Launch**

MIAX Emerald, a third options exchange wholly owned by MIH commenced operations on March 1, 2019. Emerald is a hybrid of the two existing exchanges combining a pro-rata market model with maker-taker pricing.

**MIAX Emerald, LLC**  
**Notes to Financial Statements**  
**December 31, 2018**

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**Cash Funding**

During January 2019, the Company received \$5 million in funding from the Parent.

**Debt Issuances**

Since January 1, 2019, the Parent has received long-term loan proceeds of \$2,000,000, representing an additional drawdown on the loan described in Note 6. In April, 2019 the Parent refinanced the loan with the same lender for a new principal amount of \$77 million in connection with the 2019 Loan Transaction. The new loan has a 5-year term maturing on April 26, 2024 with a fixed interest rate of 13.75%.

**Sale of NOLs**

Since January 1, 2019, the Parent has received proceeds from the sale of its 2016 and 2017 New Jersey NOLs of \$2,006,887.



**MIAMI INTERNATIONAL TECHNOLOGIES, LLC**

**Financial Statements  
December 31, 2018 and 2017**

**(Unaudited)**

**MIAMI INTERNATIONAL TECHNOLOGIES, LLC**  
**BALANCE SHEETS**  
**(UNAUDITED)**

	<b>2018</b>	<b>2017</b>
<b>ASSETS</b>		
<b>CURRENT ASSETS</b>		
Cash and cash equivalents	\$ 41,943	\$ 37,542
Accounts receivable	45,000	45,000
Prepaid and other current assets	4,500	4,169
Total current assets	91,443	86,711
Other assets	3,882	7,505
Total assets	\$ 95,325	\$ 94,216
<b>LIABILITIES AND MEMBER'S EQUITY</b>		
<b>CURRENT LIABILITIES</b>		
Accounts payable and other liabilities	\$ 37,306	\$ 50,661
Accrued compensation payable	237,459	422,813
Total current liabilities	274,765	473,474
Due to Miami International Holdings, Inc.	9,959,053	8,251,365
Total liabilities	10,233,818	8,724,839
<b>DEFICIT IN MEMBER'S EQUITY</b>		
Accumulated losses	(10,138,493)	(8,630,623)
Total member's deficit	(10,138,493)	(8,630,623)
Total liabilities and deficit in member's equity	\$ 95,325	\$ 94,216

**MIAMI INTERNATIONAL TECHNOLOGIES, LLC**  
**STATEMENTS OF OPERATIONS**  
**(UNAUDITED)**

	<b>Years Ended December 31,</b>	
	<b>2018</b>	<b>2017</b>
<b>REVENUES</b>		
Other revenue	\$ 279,000	\$ 136,400
Total revenues	279,000	136,400
<b>OPERATING EXPENSES</b>		
Employee compensation and benefits	1,598,255	2,263,048
Information technology and communication costs	2,056	4,246
Occupancy costs	31,509	49,562
Financial and banking consulting services	129,861	122,487
Share based compensation to third parties	3,564	5,802
Other	21,625	127,957
Total operating expenses	1,786,870	2,573,102
<b>OPERATING LOSS</b>	<b>(1,507,870)</b>	<b>(2,436,702)</b>
<b>NET LOSS</b>	<b>\$ (1,507,870)</b>	<b>\$ (2,436,702)</b>
Member's deficit at beginning of year	(8,630,623)	(6,193,921)
Member's deficit at end of year	<b>\$ (10,138,493)</b>	<b>\$ (8,630,623)</b>

**MIAMI INTERNATIONAL TECHNOLOGIES, LLC**  
**STATEMENTS OF CASH FLOWS**  
**(UNAUDITED)**

	<b>Years Ended December 31,</b>	
	<b>2018</b>	<b>2017</b>
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
Net loss	\$ (1,507,870)	\$ (2,436,702)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities		
Changes in operating assets and liabilities		
Accounts receivable	-	(40,000)
Prepaid and other current assets	(331)	2,938
Other assets	3,623	5,729
Accounts payable and other liabilities	(13,355)	(12,875)
Accrued compensation payable	(185,354)	153,351
Net cash provided by (used in) operating activities	(1,703,287)	(2,327,559)
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
Capital expenditures	-	-
Net cash used in investing activities	-	-
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>		
Due to Miami International Holdings, Inc.	1,707,688	2,302,351
Net cash provided by (used in) financing activities	1,707,688	2,302,351
Increase in cash and cash equivalents	4,401	(25,207)
Cash and cash equivalents at beginning of year	37,542	62,749
Cash and cash equivalents at end of year	<b>\$ 41,943</b>	<b>\$ 37,542</b>

Exhibit I

# EXHIBIT I

## **Exhibit Request:**

**For the latest fiscal year of the applicant, audited financial statements which are prepared in accordance with, or in the case of a foreign applicant, reconciled with, United States generally accepted accounting principles, and are covered by a report prepared by an independent public accountant. If an applicant has no consolidated subsidiaries, it shall file audited financial statements under Exhibit I alone and need not file a separate unaudited financial statement for the applicant under Exhibit D.**

## **Response:**

Audited unconsolidated financial statements for MIAX PEARL, LLC as of December 31, 2018 are attached. MIAX PEARL, LLC has no consolidated subsidiaries.

Financial Statements and Report of  
Independent Certified Public Accountants

**MIAX PEARL, LLC**

December 31, 2018 and 2017

# MIAX PEARL, LLC

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**REPORT OF INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS****Board of Directors  
MIAX PEARL, LLC**

We have audited the accompanying financial statements of MIAX PEARL, LLC (the “Company”), which comprise the balance sheets as of December 31, 2018 and 2017, and the related statements of operations and member’s deficit, and cash flows for the years then ended, and the related notes to the financial statements.

**Management’s responsibility for the financial statements**

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

**Auditor’s responsibility**

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor’s judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity’s preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity’s internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of MIAX PEARL, LLC as of December 31, 2018 and 2017, and the results of its operations and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

*Grant Thornton LLP*

New York, New York  
June 26, 2019

**MIAX PEARL, LLC**  
**Balance Sheets**  
**December 31, 2018 and 2017**

	<u>2018</u>	<u>2017</u>
<b>ASSETS</b>		
<b>CURRENT ASSETS</b>		
Cash and cash equivalents	\$ 35,307	\$ 139,205
Accounts receivable	868,572	186,623
Prepaid and other current assets	<u>915,263</u>	<u>1,272,950</u>
Total current assets	1,819,142	1,598,778
Fixed assets, net of depreciation and amortization	2,236,962	5,448,047
Internally developed software, net of amortization	3,932,280	4,576,990
Other assets	<u>1,654,265</u>	<u>2,758,964</u>
Total assets	<u>\$ 9,642,649</u>	<u>\$ 14,382,779</u>
<b>LIABILITIES AND MEMBER'S EQUITY</b>		
<b>CURRENT LIABILITIES</b>		
Accounts payable and other liabilities	\$ 1,060,285	\$ 1,590,472
Accrued compensation payable	1,190,721	1,724,901
Current debt	639,901	1,071,971
Deferred transaction revenues	<u>432,741</u>	<u>-</u>
Total current liabilities	3,323,648	4,387,344
Due to Miami International Holdings, Inc.	64,618,868	45,398,069
Long term debt	<u>389,487</u>	<u>855,889</u>
Total liabilities	68,332,003	50,641,302
Commitments and Contingencies (Note 5)		
<b>DEFICIT IN MEMBER'S EQUITY</b>		
Accumulated losses	<u>(58,689,354)</u>	<u>(36,258,523)</u>
Total member's deficit	<u>(58,689,354)</u>	<u>(36,258,523)</u>
Total liabilities and deficit in member's equity	<u>\$ 9,642,649</u>	<u>\$ 14,382,779</u>

*The accompanying notes are an integral part of these financial statements.*

**MIAX PEARL, LLC**  
**Statements of Operations and Member's Deficit**  
**December 31, 2018 and 2017**

	<u>Year Ended</u> <u>December 31, 2018</u>	<u>Year Ended</u> <u>December 31, 2017</u>
REVENUES		
Transaction fees	\$ 109,553,554	\$ 19,263,286
Access fees	3,568,785	1,992,691
Regulatory fees	7,176,912	3,459,167
Market data fees	3,255,005	177,896
Other revenue	<u>76,333</u>	<u>-</u>
Total revenues	123,630,589	24,893,040
COST OF REVENUES		
Transaction rebates	<u>(114,680,701)</u>	<u>(19,123,738)</u>
NET REVENUES	<u>8,949,888</u>	<u>5,769,302</u>
OPERATING EXPENSES INCURRED DIRECTLY OR ALLOCATED FROM PARENT		
Employee compensation and benefits	8,545,540	11,892,727
Information technology and communication costs	3,698,440	4,243,783
Depreciation and amortization	4,783,245	4,173,234
Occupancy costs	581,783	722,287
Professional services	188,548	71,648
Regulatory services fees	879,812	875,546
Financial and banking consulting services	478,695	119,626
Trading operations costs	5,788,535	1,009,191
Share based compensation to third parties	41,671	13,929
Directors' fees	482,511	406,419
Other	<u>799,287</u>	<u>1,100,518</u>
Total operating expenses	<u>26,268,067</u>	<u>24,628,908</u>
OPERATING LOSS	<u>(17,318,179)</u>	<u>(18,859,606)</u>
Interest expense	(140,507)	(279,777)
Financing related costs	<u>(4,972,145)</u>	<u>-</u>
NET LOSS	<u>(22,430,831)</u>	<u>(19,139,383)</u>
Member's deficit at beginning of year	<u>(36,258,523)</u>	<u>(17,119,140)</u>
Member's deficit at end of year	<u>\$ (58,689,354)</u>	<u>\$ (36,258,523)</u>

*The accompanying notes are an integral part of these financial statements.*

**MIAX PEARL, LLC**  
**Statements of Cash Flows**  
**December 31, 2018 and 2017**

	<u>Years Ended December 31,</u>	
	<u>2018</u>	<u>2017</u>
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
Net loss	\$ (22,430,831)	\$ (19,139,383)
Adjustments to reconcile net loss to net cash used in operating activities		
Depreciation and amortization	4,783,245	4,173,234
Changes in operating assets and liabilities		
Accounts receivable	(681,949)	(186,623)
Prepaid and other current assets	357,687	(276,255)
Other assets	825,068	(2,671,222)
Accounts payable and other liabilities	(530,186)	472,008
Accrued compensation payable	(534,181)	768,970
Deferred transaction revenue	432,741	-
Net cash used in operating activities	<u>(17,778,406)</u>	<u>(16,859,271)</u>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
Capital expenditures	<u>(570,941)</u>	<u>(2,500,897)</u>
Net cash used in investing activities	<u>(570,941)</u>	<u>(2,500,897)</u>
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>		
Proceeds from debt	109,758	138,292
Repayments of term debt	(1,085,108)	(1,919,190)
Due to Miami International Holdings, Inc.	<u>19,220,799</u>	<u>16,280,271</u>
Net cash provided by financing activities	<u>18,245,449</u>	<u>14,499,373</u>
Increase (decrease) in cash and cash equivalents	(103,898)	(4,860,795)
Cash and cash equivalents at beginning of year	<u>139,205</u>	<u>5,000,000</u>
Cash and cash equivalents at end of year	<u>\$ 35,307</u>	<u>\$ 139,205</u>
Cash paid during the year for interest	<u>\$ 140,507</u>	<u>\$ 279,777</u>
<b>Non-cash investing activities</b>		
Assets acquired under capital leases	\$ 76,878	\$ 847,771
Non-cash amount related to capitalized internally developed software	<u>26,471</u>	<u>206,189</u>
Total non-cash investing activities	<u>\$ 103,349</u>	<u>\$ 1,053,960</u>

*The accompanying notes are an integral part of these financial statements.*

**MIAX PEARL, LLC**  
**Notes to Financial Statements**  
**December 31, 2018 and 2017**

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**1. ORGANIZATION AND OPERATIONS**

MIAX PEARL, LLC (“PEARL” or the “Company”) was formed in the State of Delaware on February 11, 2016 and is a wholly-owned subsidiary of Miami International Holdings, Inc. (the “Parent” or “MIH”), and an affiliate of Miami International Securities Exchange, LLC (“MIAX”), Miami International Technologies, LLC (“MIAX Technologies”), Miami International Futures Exchange, LLC (“MIAX Futures”) and MIAX Global, LLC, which was formed on June 30, 2015. MIAX provides a marketplace and facilities for the trading of options products for its members and employs a pro-rata market model. Emerald, a third equity options exchange which launched on March 1, 2019 is a hybrid of the first two exchanges, with a pro-rata market model similar to that of MIAX, combined with maker-taker pricing which is offered by PEARL. MIAX Futures intends to provide a marketplace and facilities for the trading of futures products for its members, but is currently inactive. MIAX Technologies will sell or license trading technology.

On December 13, 2016, the Company received an Approval Order from The United States Securities and Exchange Commission (“SEC”) of its application for registration as a National Securities Exchange and began trading equity options on February 6, 2017.

Due to the fact that the Company has incurred a cumulative loss of approximately \$59 million from February 27, 2008 (date of inception) to December 31, 2018, substantial doubt was raised in the past about the Company’s ability to continue as a going concern. These periodic shortfalls were covered through capital raises and short-term borrowing but the Company’s continuation as a going concern was dependent on its ability to obtain this additional financing.

In an effort to address the conditions and events that gave rise to this situation, management implemented a plan that included a refinancing with its current lender which has provided a substantial cash surplus for the next 12-24 month period. This new loan agreement for \$77 million (of which approximately \$43 million was utilized to repay the outstanding debt with the same lender), is described in more detail in Note 12. To further ensure that the three exchange subsidiaries adequately fund their operations and fulfill their obligations, the parent company, MIH has executed separate funding agreements with MIAX, PEARL and Emerald which provide for seed capital and guarantee ongoing financial support.

Based on the developments outlined above which have substantially enhanced the Company’s cash position as well as the projected results for the next twelve months, management has concluded that there is sufficient liquidity to mitigate the risk that the Company can continue as a going concern. This is based on the following:

- Strong cash position which will provide a cushion in the event that actual results fall short of projections.
- Continued revenue and market share growth.
- Expansion to a business model that includes diversified revenue streams.
- Availability of additional funding from the current lender as well as an equipment financing option to build the equities exchange.

**MIAX PEARL, LLC**  
**Notes to Financial Statements**  
**December 31, 2018 and 2017**

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In the event that these steps are not effective and there is a liquidity shortfall, management has other contingency plans and options that are available that would include reducing costs, raising additional capital or expanding current refinancing. There can be no assurance as to the availability or terms upon which such financing and capital might be available.

**2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

**Basis of Presentation**

The accompanying financial statements have been prepared in accordance with accounting principles generally accepted in the United States ("US GAAP").

**Use of Estimates**

The preparation of financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements, and the reported amounts of expenses during the reporting period. Actual results could differ from those estimates.

**Cash and Cash Equivalents**

All highly liquid investments purchased with an original maturity of three months or less are considered cash equivalents.

The Company periodically maintains cash balances at financial institutions in excess of the \$250,000 Federal Deposit Insurance Corporation insurance limit. As of December 31, 2018 and 2017 cash and cash equivalents were held at major financial institutions. Cash and cash equivalents approximate fair value. It is the Company's policy to monitor the credit standing of the financial institutions with which it conducts business.

**Prepaid Expenses**

Prepaid expenses primarily consist of prepaid software maintenance fees and insurance which are amortized over the respective periods.

**Accounts Receivable**

Accounts receivable consists primarily of transaction, access and regulatory fees and the Company's share of distributable revenue receivable from the Options Price Reporting Authority ("OPRA"). Accounts receivable are primarily collected through the Options Clearing Corporation ("OCC") and are with large, highly-rated clearing firms; therefore concentrations of credit risk are limited. The Company has no financing related receivables.

**Fixed Assets**

Fixed assets are recorded at cost. Depreciation is computed on a straight-line basis over the estimated useful lives of the related assets ranging from three to five years. Fixed assets acquired under capital leases are depreciated over the life of the lease.

**MIAX PEARL, LLC**  
**Notes to Financial Statements**  
**December 31, 2018 and 2017**

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Leasehold improvements are amortized over the estimated useful lives of the improvements or the remaining terms of the leases, whichever is less. Any gain or loss on the retirement of assets is recognized currently.

Depreciable assets are only evaluated for impairment upon a significant change in the operating or macroeconomic environment. In these circumstances, if an evaluation of the undiscounted cash flows indicates impairment, the asset is written down to its estimated fair value, which is based on discounted future cash flows. Useful lives are periodically evaluated to determine whether events or circumstances have occurred that indicate the need for revision.

**Computer Software Developed or Obtained for Internal Use**

The Company follows the provisions of ASC 350, Intangibles - Goodwill and Other ("ASC 350"). The Company capitalizes costs of internally developed software incurred during the application development stage, which includes design, coding, installation and testing activities. The Company amortizes these costs over the period to which benefit is provided.

**Other Assets**

Other assets are comprised of the cost of various trade memberships and deferred charges.

**Due to Miami International Holdings, Inc.**

The majority of all of the Company's expenditures to date have been funded by the Parent. The Due to MIH balance represents the combination of allocated costs for the current period as well as the liability for allocated net assets.

Management has determined that substantially all costs, other than direct financing and other financing related costs, for the build out of a marketplace and facility for the trading of equity options, are primarily attributable to the Company, MIAX and EMERALD. The Company's allocated portion of cost are included in the accompanying statements of operations and member's deficit. While equipment leasing costs are allocated to MIAX, PEARL and EMERALD, all other financing and capital raising costs are not allocated to the subsidiaries and are reflected solely in the Parent company financial statements. The Company considers changes in Due to MIH to be financing activity for purposes of the statements of cash flows.

**Revenue Recognition**

The Company's revenue recognition policies comply with ASC 605, Revenue Recognition ("ASC 605"). Revenue will be recognized when all of the following criteria are met: (1) persuasive evidence that an arrangement exists; (2) delivery has occurred or services have been rendered; (3) the seller's price to the buyer is fixed and determinable; and (4) collectability is reasonably assured. Revenue recognition policies for specific sources of revenue are discussed below:

*Transaction Fees:* Transaction fees are a function of three variables: (1) exchange fee rates; (2) overall industry trading volume; and (3) market share achieved by PEARL. Transaction fees are assessed on a per contract basis and are considered earned upon the execution of a trade and are recognized on a trade date basis. Transaction fees are recorded net of applicable volume discounts.

**MIAX PEARL, LLC**  
**Notes to Financial Statements**  
**December 31, 2018 and 2017**

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Rebates paid for certain customer transactions are recorded separately as a cost of revenue. In the event that member firms prepay for transaction fees, revenue is recognized as transaction fees are incurred.

*Access Fees:* Access fees represent fees assessed to PEARL members for their connections to the PEARL servers. These fees are recognized during the period the service is provided.

*Market Data Fees:* Market data revenue is comprised of distributions from PEARL's participation in OPRA and is distributed based upon each individual exchange's market share of total options contracts cleared by the OCC.

*Regulatory Fees:* Regulatory fees include the Options Regulatory Fee ("ORF") and Section 31 fees. ORF is based on the number of customer contracts, as reported by OCC, executed or cleared by PEARL members on all US options exchanges and is recognized on a trade date basis. Section 31 fees of \$3,030,394 are also included in regulatory fees and are charged to MIAX PEARL members. Section 31 fees are used to offset similar fees charged to PEARL by the SEC which are included in trading operations costs.

*Deferred Transaction Revenue:* The Company has classified amounts totaling \$432,741 representing prepaid PEARL fees (see Note 7 – Equity Rights Offering IV) as deferred revenue at December 31, 2018. Deferred revenue is amortized to income over the applicable future periods as transaction fees are earned.

#### **Income Taxes**

PEARL is a single member limited liability company and was structured as a disregarded entity for U.S. federal, state and local income tax purposes. Accordingly, no provision for income taxes is made in PEARL's financial statements.

#### **Recent Accounting Pronouncements**

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2014-09, Revenue for Contracts with Customers (Topic 606). Upon the effective date, the ASU replaces almost all existing revenue recognition guidance, including industry specific guidance, in US GAAP. The standard provides a five-step analysis of transactions to determine when and how revenue is recognized, based upon the core principle that revenue is recognized to depict the transfer of goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In addition, the standard requires additional disclosures regarding the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. In August 2015, the FASB subsequently issued ASU 2015-14, Revenue from Contracts with Customers - Deferral of the Effective Date that resulted in a one year deferral of ASU 2014-09 for fiscal years beginning after December 15, 2018. Early adoption is permitted for fiscal years beginning after December 15, 2016. The Company is currently evaluating the impact of the adoption of this standard on its financial statements but does not expect it to have a material impact, if any.

**MIAX PEARL, LLC**  
**Notes to Financial Statements**  
**December 31, 2018 and 2017**

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In February 2016, the FASB issued ASU 2016-02, which describes the principles for the recognition, measurement, presentation and disclosure of leases for both parties of the contract (both lessees and lessors).

The new standard requires classifying leases as either finance or operating leases and will determine whether lease expense is recognized based on an effective interest method or on a straight line basis over the term of the lease, respectively. Regardless of the classification, a lessee is also required to record a right-of-use asset and a lease liability for all leases with a term of greater than 12 months. This guidance is effective for reporting periods beginning after December 15, 2019, however early adoption is permitted. Entities are required to use a modified retrospective approach for leases that exist or are entered into after the beginning of the earliest comparative period in the financial statements. The Company is currently evaluating the impact that ASU 2016-02 will have on its consolidated financial statements.

**3. FIXED ASSETS**

The Company's allocation of fixed assets is comprised of the following:

	<u>2018</u>	<u>2017</u>
Furniture and equipment	\$ 9,996,454	\$ 9,595,262
Software	<u>208,440</u>	<u>187,154</u>
	10,204,894	9,782,416
Less - accumulated depreciation and amortization	<u>8,276,225</u>	<u>4,973,942</u>
	<u>1,928,669</u>	<u>4,808,474</u>
Capitalized internally developed software in-progress	<u>308,293</u>	<u>639,573</u>
	<u>\$ 2,236,962</u>	<u>\$ 5,448,047</u>

Depreciation expense for the years ended December 31, 2018 and 2017 was \$3,581,915 and \$2,970,969, respectively. Substantially all of the assets are pledged as described in Note 6.

**4. INTERNALLY DEVELOPED SOFTWARE**

The Company capitalized \$3,932,280 and \$4,576,990 of development costs, net of amortization as of December 31, 2018 and 2017, respectively. Amortization expense of \$1,201,330 and \$1,008,937 were recorded in 2018 and 2017, respectively.

**MIAX PEARL, LLC**  
**Notes to Financial Statements**  
**December 31, 2018 and 2017**

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Future amortization of internally developed software is as follows:

**Years Ending December 31,**

2019	\$ 1,230,575
2020	1,230,575
2021	1,220,247
2022	221,637
2023	<u>29,245</u>
	<u>\$ 3,932,280</u>

**5. COMMITMENTS AND CONTINGENCIES**

**Operating Leases**

The Parent leases space for its Princeton, New Jersey office under various operating lease agreements. The leases are for approximately 30,761 square feet (the "Princeton Premises") and continue through May 31, 2020.

In April 2017, the Parent entered into an amendment for the lease for the Princeton Premises for an additional 18,550 square feet of office space for a term commencing on May 1, 2017 through March 31, 2026. The additional space will allow for the expansion of business activities.

In April 2017, the Parent additionally entered into a sublease for approximately 7,000 square feet used as a gym space in the same building as the Princeton Premises ("Fitness Center"). The lease term for the Fitness Center commenced on May 1, 2017 and continues through March 31, 2022.

**Claims and Litigation**

On September 1, 2017, Nasdaq, Inc., Nasdaq ISE, LLC and FTEN, INC, (collectively, "Nasdaq") filed an action (Civil Action No. 3:17-CV-06664) against Miami International Holdings, Inc., Miami International Securities Exchange, LLC, MIAX PEARL, LLC and Miami International Technologies, LLC (collectively, "MIH") in the U.S. District Court for the District of New Jersey. The Complaint alleges patent infringement and trade secret misappropriation relating to Nasdaq's electronic trading technology and platforms. MIH engaged outside counsel Fish & Richardson LLP and Reed Smith LLP to represent it in this action.

On December 4, 2017, MIH filed a motion to dismiss the claims against it. Nasdaq responded with an opposition to MIH's motion on January 15, 2018. MIH filed its reply in support of the motion to dismiss on January 29, 2018. The Court then set a hearing on the motion to dismiss for April 17, 2018, and also directed that the parties engage in a settlement conference at that time. Subsequently, counsel for Nasdaq filed a motion to disqualify Fish & Richardson as counsel for the Company and the motion to dismiss has been postponed until after the Court decides this issue. MIH intends to continue to defend itself vigorously in this matter.

**MIAX PEARL, LLC**  
**Notes to Financial Statements**  
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In September, 2018 Nasdaq's motion to disqualify Fish & Richardson as counsel for the trade secrets and claims related to 3 of the patents was granted. The Parent's appeal of this disqualification was denied in November, 2018. In March and April, 2018 the Parent filed seven petitions for Covered Business Method Review ("CMBR") before the Patent Trial and Appeal Board at the United States Patent and Trademark Office ("USPTO") Each petition seeks a determination that the subject patent is invalid under the current law. Final ruling on these petitions is expected in October and November of 2019. In the interim, Nasdaq withdrew its claims on one of the seven patents, leaving the remaining six to be evaluated by USPTO. On December, 3, 2018 the Parent motion to stay the entire litigation pending the outcome at the USPTO was granted in full.

In the normal course of its business, the Company is exposed to asserted and unasserted claims. In the opinion of management, these matters will not have a material adverse effect on the Company's financial position, results of operations or cash flows.

**Employees and Directors**

The Parent has entered into employment agreements with certain employees. In addition to base salaries, the agreements provide for issuance of stock options, retention and, in part, incentive bonuses based on criteria established by the Board of Directors.

**6. DEBT OBLIGATIONS**

In June 2016, the Parent entered into a loan agreement with a lender to borrow \$30 million with a 5-year maturity at an interest rate that is 12.5% above LIBOR, which is set at a minimum of 1%. The initial rate of 13.5% was evaluated on a quarterly basis and adjusted for fluctuations in the LIBOR rate. In conjunction with the loan, the lender was granted a first priority lien against all of the assets of the Company. These assets include deposit accounts, documents, equipment, fixtures and improvements, general intangibles and intellectual property.

On December 31, 2018 the Parent borrowed an additional \$5 million from the lender and at the same time negotiated a postponement of the first scheduled semi-annual principal repayment of \$6 million, which was also due on that date.

The allocated debt obligations of the Company at December 31, 2018 and 2017 were \$109,758 and \$138,292 which represented the remaining balance of a financing arrangement for annual insurance premiums and are include in Current Debt.

**Lease Agreements**

In January 2016 the Parent entered into two additional leases with an existing vendor and leased equipments valued at \$1.5 million for a 24-month term. Both leases carry an interest rate of 15% and were accounted for as capital leases. Both leases were allocated in their entirety to the Company.

In November 2017, the Parent entered into two additional subleases with the same vendor and leased equipment valued at \$2,284,718 for a 36-month term. Both subleases carry an interest rate of 9.57% and were accounted for as capital leases. The Company was allocated \$847,771 of this equipment lease.

**MIAX PEARL, LLC**  
**Notes to Financial Statements**  
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In June 2018, the Parent entered into an additional sublease with the same vendor and leased equipment valued at \$2,117,897 for a 36-month term. In July 2018, the Parent entered into another sublease with the vendor and leased equipment valued at \$140,789 for a 36-month term. Both subleases carry an interest rate of 9.7% and were accounted for as capital leases. The Company was allocated \$76,878 of these equipment leases.

In April 2016, the Parent entered into an equipment lease with one of its vendors for equipment valued at \$2,356,524 for a 24-month term. The lease carries an interest rate of 12%. The Company was allocated \$1,674,263 of this equipment lease. That same month the Parent entered into another equipment lease with a leasing company for equipment valued at \$1,160,191 for a 48-month term at an interest rate of 14.74%. The Company was allocated \$877,443 of this equipment lease. Both leases were accounted for as capital leases.

Allocated obligations under all capital leases at December 31, 2018 and 2017 were \$919,630 and \$1,789,569, respectively. The accumulated amortization for all capital leases at December 31, 2018 and 2017 were \$4,128,237 and \$2,452,265, respectively.

Future minimum lease payments under these obligations at December 31, 2018 are:

**Years Ending December 31,**

2019	\$	599,121
2020		393,742
2021		<u>12,578</u>
Total future payments		1,005,441
Less interest		<u>85,811</u>
Net capital lease liability	\$	<u>919,630</u>

**7. EQUITY**

PEARL is a single member limited liability company and has issued 100 membership units constituting 100% membership interest in the Company to MIH who is the Company's sole member. PEARL has not made any distributions for the period from February 11, 2016 (inception) through December 31, 2018.

**Equity Rights Offering IV**

As approved by the Board of Directors on April 24, 2018 the Parent authorized the issuance and sale of up to two (2) I-Units and up to twenty-five (25) J-Units to the members of PEARL Exchange.

On April 30, 2018 the Company entered into a fourth Equity Rights offering with 10 strategic investors to acquire 25 J-Units for a total prepaid fee of \$6,250,000.

**MIAX PEARL, LLC**  
**Notes to Financial Statements**  
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Each J-Unit consists of common stock purchase warrants to purchase 416,344 shares of common stock of the Company and requires a prepaid fee of \$250,000, similar to that of MIAX ERP II. The term of the transaction is the 32-month period commencing May 1, 2018 and ending December 31, 2020. The basic terms of the fourth offering are similar to the first two offerings with the respect to warrant vesting features and exercise periods.

For the year ended December 31, 2018, the Parent recognized warrant expense of \$4,972,146, representing the fair market value associated with vested warrants due to the Offering Participants meeting their performance criteria in the fourth Equity Rights offering. This expense was allocated in its entirety to the Company and is included in financing related costs in the statement of operations. Additionally, the Company amortized \$5,817,259 of the prepaid transaction fees to income during the year ended December 31, 2018 leaving an unamortized balance of \$432,741.

**8. EMPLOYEE BENEFIT PLAN**

The Parent sponsors a voluntary defined contribution 401(k) plan, which covers substantially all of the Company's employees. Neither the Parent nor the Company contributed to the 401(k) plan in 2018 or 2017.

**9. DIRECTORS FEES**

In September 2016, the Board of Directors of the Company approved the compensation amounts to be paid to Independent Directors and Committee Members of the Company for the period beginning May 1, 2016 until such time as the Board determines it is in the best interests of the Company to adopt new compensation terms (the "Director & Committee Fee Compensation"). Independent Directors and Committee Members of the Company are compensated as follows:

Independent Directors and Committee Members of PEARL who also serve in the same capacity for another MIH Self-Regulatory Organization ("SRO") subsidiary each shall receive a rate of one-half of such compensation paid by the Company SRO subsidiary for the year, pro rata. Independent Directors serving in a sole capacity for PEARL, each receive \$50,000 for the year, pro rata. Committee Members each receive varying amounts, pro rata, depending on which committee(s) such Committee Member is appointed. The Director & Committee Fee Compensation is payable pursuant to the following two options: (i) a maximum of 50% cash payable quarterly and the balance in stock options to purchase Nonvoting Common Stock of the Company under the 2013 Stock Option and Incentive Plan for Non-Employee Directors, Committee Members and Members of the Board of Advisors (the "2013 Stock Option and Incentive Plan"), valued at the grant date, generally vesting quarterly and having a term of 10 years; or (ii) taking 100% of the Director & Committee Fee Compensation in Nonvoting Common Stock options under the 2013 Stock Option and Incentive Plan, valued at the grant date and generally vesting quarterly.

The number of options to be granted to Independent Directors is based the Director & Committee Fee Compensation divided by the value of each option under a theoretical valuation, and the exercise price applicable to each option is the fair market value ("FMV") at the time of the grant.

**MIAX PEARL, LLC**  
**Notes to Financial Statements**  
**December 31, 2018 and 2017**

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Additionally, an Independent Director (not a Committee Member) serving in a sole capacity for the Company receives \$20,000 in value of Nonvoting Common Stock options and an Independent Director (not a Committee Member) who also serves in the same capacity for another Company SRO subsidiary shall receive \$10,000 in value of Nonvoting Common Stock option paid by the Company SRO subsidiary under the 2013 Stock Option and Incentive Plan annually, commencing in the calendar year following his/her first year of board service, vesting quarterly and having a term of 10 years. The same theoretical valuation discussed above would be used to determine how many options would be granted to the Independent Director annually.

Additionally, a new Independent Director only (not a Committee Member) serving in a sole capacity for the Company, upon first appointment to the Board of Directors or the board of a subsidiary of the Company, will receive a grant of 50,000 Nonvoting Common Stock options under 2013 Stock Option and Incentive Plan that will fully vest after 9 months of service as a director to the Company with the exercise price being FMV on the grant date and having a term of 10 years.

**10. SUBSEQUENT EVENTS**

The Company has evaluated the possibility of subsequent events existing in the Company's financial statements through June 26, 2019, the date the financial statements were available to be issued. The Company has determined that there are no material events that would require disclosure in the Company's financial statements other than those listed below and elsewhere in these financial statement.

**Debt Issuances**

Since January 1, 2019, the Parent has received long-term loan proceeds of \$2,000,000, representing an additional drawdown on the loan described in Note 6. In April, 2019 the Parent refinanced the loan with the same lender for a new principal amount of \$77 million in connection with the 2019 Loan Transaction. The new loan has a 5-year term maturing on April 26, 2024 with a fixed interest rate of 13.75%.

**Equity Rights Program V**

Since January 1, 2019, the Parent entered into agreements providing for the issuance of warrants to purchase a total of 5,768,750 shares of Common Stock to seven firms in consideration for the prepayment of certain exchange fees to PEARL once the MIAX PEARL Equities exchange is operational and following the satisfaction of certain closing conditions including the effectiveness of SEC rule filings required in connection therewith.

**Sale of NOLs**

Since January 1, 2019, the Parent has received proceeds from the sale of its 2016 and 2017 New Jersey NOLs of \$2,006,887.

Exhibit K

## **EXHIBIT K**

### **Exhibit Request:**

**This Exhibit is applicable only to exchanges that have one or more owners, shareholders, or partners that are not also members of the exchange. If the exchange is a corporation, please provide a list of each shareholder that directly owns 5% or more of a class of a voting security of the applicant. If the exchange is a partnership, please provide a list of all general partners and those limited and special partners that have the right to receive upon dissolution, or have contributed, 5% or more of the partnership's capital. For each of the persons listed in the Exhibit K, please provide the following:**

- 1. Full legal name;**
- 2. Title or Status;**
- 3. Date title or status was acquired;**
- 4. Approximate ownership interest; and**
- 5. Whether the person has control, a term that is defined in the instructions to this Form.**

### **Response:**

Miami International Holdings, Inc. owns 100% of MIAX PEARL, LLC. Miami International Holdings, Inc. exercises "control" over the Exchange, as that term is defined in the Form 1 instructions. MIAX PEARL, LLC became a wholly-owned subsidiary of Miami International Holdings, Inc. on March 7, 2016.

**Exhibit M**

## EXHIBIT M

### Exhibit Request:

Provide an alphabetical list of all members, subscribers or other users, including the following information:

1. Name;
2. Date of election to membership or acceptance as a member, subscriber or other user;
3. Principal business address and telephone number;
4. If member, subscriber or other user is an individual, the name of the entity with which such individual is associated and the relationship of such individual to the entity (e.g. partner, officer, director, employee, etc.);
5. Describe the type of activities primarily engaged in by the member, subscriber, or other user (e.g. floor broker, specialist, odd lot dealer, other market maker, proprietary trader, non-broker dealer, inactive or other functions). A person shall be “primarily engaged” in an activity or function for purposes of this item when that activity or function is the one in which that person is engaged for the majority of their time. When more than one type of person at an entity engages in any of the six types of activities or functions enumerated in this item, identify each type (e.g. proprietary trader, Registered Competitive Trader and Registered Competitive Market Maker) and state the number of participants, subscribers, or other users in each; and
6. The class of membership, participation or subscription or other access.

### Response:

Attached is a list of the members of the Exchange as of June 17, 2019, including the information set forth in items 1-6 above.

**MEMBER FIRMS**


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**ABN AMRO CLEARING CHICAGO LLC**

 175 West Jackson Blvd., Ste. 2050  
 Chicago IL 60604

Tele #: (312) 604-8000

Approval Date: 2/6/2017

**PEARL Membership Activities:**  
 ELECTRONIC EXCH. MEMBER: CLEARANCE

International Tele #:

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**AKUNA SECURITIES LLC**

 333 S. Wabash Avenue, Suite 2600  
 Chicago IL 60604

Tele #: (312) 994-4640

Approval Date: 4/17/2017

**PEARL Membership Activities:**  
 MARKET MAKER

International Tele #:

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**AMS DERIVATIVES B.V.**

 Strawinskylaan 3095  
 Amsterdam, 1077ZX  
 Netherlands

Tele #:

Approval Date: 10/26/2018

**PEARL Membership Activities:**  
 MARKET MAKER/EEM: ORDER FLOW

International Tele #: +31 20 708 7748

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**APEX CLEARING CORPORATION**

 One Dallas Center  
 350 N. St. Paul, Suite 1300  
 Dallas TX 75201

Tele #: (214) 765-1100

Approval Date: 2/6/2017

**PEARL Membership Activities:**  
 ELECTRONIC EXCH. MEMBER: CLEARANCE

International Tele #:

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**BARCLAYS CAPITAL INC.**

 745 Seventh Avenue  
 New York NY 10019

Tele #: (212) 526-7000

Approval Date: 2/6/2017

**PEARL Membership Activities:**  
 MARKET MAKER/EEM: ORDER FLOW/CLEARANCE

International Tele #:

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**BOFA SECURITIES, INC.**

 One Bryant Park  
 222 Broadway  
 New York NY 10038

Tele #: (646) 743-2734

Approval Date: 11/1/2018

**PEARL Membership Activities:**  
 ELECTRONIC EXCH. MEMBER: ORDER FLOW/CLEARANCE

International Tele #:

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**CITADEL SECURITIES LLC**

 131 South Dearborn Street - 32nd Floor  
 Chicago IL 60603

Tele #: (312) 395-2100

Approval Date: 2/6/2017

**PEARL Membership Activities:**  
 MARKET MAKER/EEM: ORDER FLOW

International Tele #:

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**CITIGROUP GLOBAL MARKETS INC.**

 390-388 Greenwich Street  
 New York NY 10013

Tele #: (212) 816-6000

Approval Date: 5/1/2019

**PEARL Membership Activities:**  
 ELECTRONIC EXCH. MEMBER: ORDER FLOW/CLEARANCE

International Tele #:

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**CREDIT SUISSE SECURITIES (USA) LLC**11 Madison Avenue - 24th Floor  
New York NY 10010

Tele #: (212) 325-2000

International Tele #:

Approval Date: 2/6/2017

**PEARL Membership Activities:**

ELECTRONIC EXCH. MEMBER: ORDER FLOW/CLEARANCE

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**CUTLER GROUP, LP**101 Montgomery Street, Ste. 700  
San Francisco CA 94104

Tele #: (415) 293-3956

International Tele #:

Approval Date: 2/6/2017

**PEARL Membership Activities:**

MARKET MAKER/EEM: ORDER FLOW

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**DASH FINANCIAL TECHNOLOGIES LLC**311 S. Wacker Drive, Ste. 1000  
Chicago IL 60606

Tele #: (847) 550-1730

International Tele #:

Approval Date: 2/6/2017

**PEARL Membership Activities:**

ELECTRONIC EXCH. MEMBER: ORDER FLOW/CLEARANCE

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**DEUTSCHE BANK SECURITIES INC.**60 Wall Street  
New York NY 10005

Tele #: (212) 250-2500

International Tele #:

Approval Date: 2/6/2017

**PEARL Membership Activities:**

ELECTRONIC EXCH. MEMBER: ORDER FLOW/CLEARANCE

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**DRW SECURITIES, L.L.C.**540 West Madison, Ste. 2500  
Chicago IL 60661

Tele #: (312) 542-3231

International Tele #:

Approval Date: 11/14/2017

**PEARL Membership Activities:**

ELECTRONIC EXCH. MEMBER: ORDER FLOW

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**GLOBAL EXECUTION BROKERS, LP**401 City Avenue, Ste. 200  
Bala Cynwyd PA 19004

Tele #: (610) 617-2600

International Tele #:

Approval Date: 2/6/2017

**PEARL Membership Activities:**

ELECTRONIC EXCH. MEMBER: ORDER FLOW

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**GOLDMAN SACHS & CO. LLC**200 West Street  
New York NY 10282

Tele #: (212) 902-1000

International Tele #:

Approval Date: 2/6/2017

**PEARL Membership Activities:**

ELECTRONIC EXCH. MEMBER: ORDER FLOW/CLEARANCE

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**GROUP ONE TRADING LP**425 S. Financial Place - Ste. 3400  
Chicago IL 60605

Tele #: (312) 347-8864

International Tele #:

Approval Date: 2/6/2017

**PEARL Membership Activities:**

ELECTRONIC EXCH. MEMBER: ORDER FLOW

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**HRT FINANCIAL LLC**4 World Trade Center  
150 Greenwich Street - 57th Floor  
New York NY 10007

Tele #: (212) 293-1444

International Tele #:

Approval Date: 4/5/2017

**PEARL Membership Activities:**

ELECTRONIC EXCH. MEMBER: ORDER FLOW

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**IMC-CHICAGO, LLC D/B/A IMC FINANCIAL MARKETS**

233 South Wacker Drive, Ste. #4300

Chicago IL 60606

Tele #: (312) 244-3300

International Tele #:

Approval Date: 2/6/2017

**PEARL Membership Activities:**

MARKET MAKER

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**INSTINET, LLC**

Worldwide Plaza

309 West 49th Street

New York NY 10019

Tele #: (212) 310-9500

International Tele #:

Approval Date: 2/6/2017

**PEARL Membership Activities:**

ELECTRONIC EXCH. MEMBER: ORDER FLOW/CLEARANCE

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**INTERACTIVE BROKERS LLC**

One Pickwick Plaza - 2nd Floor

Greenwich CT 06830

Tele #: (203) 618-5710

International Tele #:

Approval Date: 2/6/2017

**PEARL Membership Activities:**

ELECTRONIC EXCH. MEMBER: ORDER FLOW/CLEARANCE

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**J.P. MORGAN SECURITIES LLC**

383 Madison Avenue

New York NY 10179

Tele #: (201) 595-8471

International Tele #:

Approval Date: 2/6/2017

**PEARL Membership Activities:**

ELECTRONIC EXCH. MEMBER: ORDER FLOW/CLEARANCE

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**JANE STREET CAPITAL, LLC**

250 Vesey Street - 6th Floor

New York NY 10281

Tele #: (646) 759-6000

International Tele #:

Approval Date: 4/2/2018

**PEARL Membership Activities:**

ELECTRONIC EXCH. MEMBER: ORDER FLOW

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**JANE STREET OPTIONS, LLC**

250 Vesey Street - 6th Floor

New York NY 10281

Tele #: (646) 759-6000

International Tele #:

Approval Date: 4/2/2018

**PEARL Membership Activities:**

ELECTRONIC EXCH. MEMBER: ORDER FLOW

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**JEFFERIES LLC**

520 Madison Avenue - 11th Floor

New York NY 10022

Tele #: (212) 284-2300

International Tele #:

Approval Date: 2/6/2017

**PEARL Membership Activities:**

ELECTRONIC EXCH. MEMBER: ORDER FLOW/CLEARANCE

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**JUMP TRADING, LLC**

600 West Chicago Avenue, Ste. 825

Chicago IL 60654

Tele #: (312) 205-8900

International Tele #:

Approval Date: 2/11/2019

**PEARL Membership Activities:**

MARKET MAKER

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**MATRIX EXECUTIONS, LLC**

135 S. LaSalle Street, Ste. 300

Chicago IL 60603

Tele #: (312) 334-8000

International Tele #:

Approval Date: 2/6/2017

**PEARL Membership Activities:**

ELECTRONIC EXCH. MEMBER: ORDER FLOW

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**MERRILL LYNCH PROFESSIONAL CLEARING CORP.**

One Bryant Park - 6th Floor  
NY1-100-06-01  
New York NY 10036

Tele #: (646) 743-1295

International Tele #:

Approval Date: 2/6/2017

**PEARL Membership Activities:**  
ELECTRONIC EXCH. MEMBER: CLEARANCE

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**MORGAN STANLEY & CO. LLC**

1585 Broadway  
New York NY 10036

Tele #: (212) 761-4000

International Tele #:

Approval Date: 2/6/2017

**PEARL Membership Activities:**  
MARKET MAKER/EEM: ORDER FLOW/CLEARANCE

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**OPTIVER US LLC**

130 E. Randolph Street, Ste. 1300  
Chicago IL 60601

Tele #: (312) 821-9500

International Tele #:

Approval Date: 2/6/2017

**PEARL Membership Activities:**  
MARKET MAKER

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**PERSHING LLC**

One Pershing Plaza - 10th Fl.  
Jersey City NJ 07399

Tele #: (201) 413-2000

International Tele #:

Approval Date: 2/6/2017

**PEARL Membership Activities:**  
ELECTRONIC EXCH. MEMBER: ORDER FLOW/CLEARANCE

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**SIMPLEX TRADING, LLC**

230 So. LaSalle St., Ste. 4-100  
Chicago IL 60604

Tele #: (312) 360-2440

International Tele #:

Approval Date: 2/6/2017

**PEARL Membership Activities:**  
MARKET MAKER/EEM: ORDER FLOW

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**SUSQUEHANNA INVESTMENT GROUP**

401 City Avenue, Ste. 201  
Bala Cynwyd PA 19004

Tele #: (610) 617-2600

International Tele #:

Approval Date: 3/1/2019

**PEARL Membership Activities:**  
MARKET MAKER

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**SUSQUEHANNA SECURITIES**

401 City Avenue, Ste. 220  
Bala Cynwyd PA 19004

Tele #: (610) 617-2600

International Tele #:

Approval Date: 3/1/2019

**PEARL Membership Activities:**  
MARKET MAKER

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**TWO SIGMA SECURITIES, LLC**

101 Avenue of the Americas - 19th Fl.  
New York NY 10013

Tele #: (212) 625-5700

International Tele #:

Approval Date: 9/12/2017

**PEARL Membership Activities:**  
MARKET MAKER/EEM: ORDER FLOW

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**UBS SECURITIES LLC**

1285 Avenue of the Americas  
New York NY 10019

Tele #: (203) 719-3000

International Tele #:

Approval Date: 2/6/2017

**PEARL Membership Activities:**  
ELECTRONIC EXCH. MEMBER: ORDER FLOW/CLEARANCE

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**VIRTU FINANCIAL BD LLC**307 Camp Craft Road  
Austin TX 78746

Tele #: (800) 544-7508

International Tele #:

Approval Date: 7/2/2018

**PEARL Membership Activities:**  
MARKET MAKER

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**VOLANT EXECUTION, LLC**233 S. Wacker Drive, Ste. 4040  
Chicago IL 60606

Tele #: (312) 692-5000

International Tele #:

Approval Date: 2/6/2017

**PEARL Membership Activities:**  
ELECTRONIC EXCH. MEMBER: ORDER FLOW/CLEARANCE

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**VOLANT LIQUIDITY, LLC**250 Vesey Street, Ste. 2601  
New York NY 10281

Tele #: (646) 484-3000

International Tele #:

Approval Date: 2/6/2017

**PEARL Membership Activities:**  
ELECTRONIC EXCH. MEMBER: ORDER FLOW

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**WEDBUSH SECURITIES INC.**1000 Wilshire Boulevard, Suite 900  
ATTN: Business Conduct  
Los Angeles CA 90017

Tele #: (213) 688-8090

International Tele #:

Approval Date: 2/6/2017

**PEARL Membership Activities:**  
ELECTRONIC EXCH. MEMBER: CLEARANCE

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**WELLS FARGO SECURITIES, LLC**550 South Tryon Street - 6th Floor  
D1086-060  
Charlotte NC 28202

Tele #: (704) 715-6133

International Tele #:

Approval Date: 2/6/2017

**PEARL Membership Activities:**  
ELECTRONIC EXCH. MEMBER: ORDER FLOW/CLEARANCE

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**WOLVERINE EXECUTION SERVICES, LLC**175 W. Jackson Blvd., Ste. 200  
Chicago IL 60604

Tele #: (312) 884-4000

International Tele #:

Approval Date: 2/6/2017

**PEARL Membership Activities:**  
ELECTRONIC EXCH. MEMBER: ORDER FLOW/CLEARANCE

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**WOLVERINE TRADING, LLC**175 W. Jackson Blvd., Ste. 200  
Chicago IL 60604

Tele #: (312) 884-3490

International Tele #:

Approval Date: 2/6/2017

**PEARL Membership Activities:**  
MARKET MAKER

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**Total Firms 42**

Exhibit N

## EXHIBIT N

### Exhibit Request:

Provide a schedule for each of the following:

1. The securities listed in the exchange, indicating for each the name of the issuer and a description of the security;
2. The securities admitted to unlisted trading privileges, indicating for each the name of the issuer and a description of the security;
3. The unregistered securities admitted to trading on the exchange which are exempt from registration under Section 12(a) of the Act. For each security listed, provide the name of the issuer and a description of the security, and the statutory exemption claimed (e.g. Rule 12a-6); and
4. Other securities traded on the exchange, including for each the name of the issuer and a description of the security.

### Response:

1. Attached is a list of the securities listed on the exchange as of June 3, 2019, indicating for each the name of the issuer and a description of the security.
2. None.
3. None.
4. None.

**MIAX PEARL Options Exchange (As of June 3, 2019)**

<b>Und Symbol</b>	<b>Company Name</b>	<b>Deriv Symbol</b>	<b>Inst Type</b>
A	AGILENT TECHNOLOGIES INC.	A	Equity
AA	ALCOA Corporation	AA	Equity
AABA	Altaba Inc.	AABA	Equity
AAC	AAC Holdings, Inc.	AAC	Equity
AAL	AMERICAN AIRLINES GROUP INC.	AAL	Equity
AAN	Aaron's Inc	AAN	Equity
AAOI	APPLIED OPTOELECTRONICS, INC.	AAOI	Equity
AAP	ADVANCE AUTO PARTS INC.	AAP	Equity
AAPL	APPLE INC.	AAPL	Equity
AAWW	Atlas Air Worldwide Holdings, Inc.	AAWW	Equity
AAXJ	iShares MSCI All Country Asia ex Japan ETF	AAXJ	ETF
AAXN	Axon Enterprise, Inc.	AAXN	Equity
AB	AllianceBernstein Holding L.P.	AB	Equity
ABB	ABB LTD-SPON ADR	ABB	Equity
ABBV	ABBVIE INC.	ABBV	Equity
ABC	AMERISOURCEBERGEN, CORP.	ABC	Equity
ABEO	Abeona Therapeutics Inc.	ABEO	Equity
ABEV	AMBEV S.A.	ABEV	Equity
ABG	ASBURY AUTOMOTIVE GROUP INCCOM	ABG	Equity
ABMD	ABIOMED INC	ABMD	Equity
ABR	Arbor Realty Trust, Inc.	ABR	Equity
ABT	ABBOTT LABORATORIES	ABT	Equity
ABUS	Arbutus Biopharma Corporation	ABUS	Equity
ACAD	ACADIA PHARMACEUTICALS INC.	ACAD	Equity
ACB	Aurora Cannabis Inc.	ACB	Equity
ACGL	ARCH CAPITAL GROUP Ltd	ACGL	Equity
ACH	Aluminum Corporation of China Limited	ACH	Equity
ACHC	Acadia Healthcare Co Inc	ACHC	Equity
ACHN	Achillion Pharmaceuticals, Inc.	ACHN	Equity
ACIA	Acacia Communications, Inc.	ACIA	Equity
ACIW	ACI Worldwide, Inc.	ACIW	Equity
ACLS	Axcelis Technologies Inc.	ACLS	Equity
ACM	Aecom Technology Corporation	ACM	Equity
ACN	ACCENTURE PLC	ACN	Equity
ACOR	Acorda Therapeutics, Inc.	ACOR	Equity
ACRX	AcelRx Pharmaceuticals Inc	ACRX	Equity
ACTG	ACACIA RESEARCH CORPORATION	ACTG	Equity
ACWI	iShares MSCI ACWI Index Fund	ACWI	ETF
ADAP	Adaptimmune Therapeutics PLC	ADAP	Equity
ADBE	ADOBE SYSTEMS INC.	ADBE	Equity
ADI	ANALOG DEVICES INC	ADI	Equity
ADM	ARCHER DANIELS MIDLAND COMPANY	ADM	Equity
ADMP	Adamis Pharmaceuticals Corporation	ADMP	Equity
ADMS	Adamas Pharmaceuticals, Inc.	ADMS	Equity
ADNT	Adient plc	ADNT	Equity
ADP	AUTOMATIC DATA PROCESSING INC	ADP	Equity
ADRO	Aduro BioTech, Inc.	ADRO	Equity
ADS	ALLIANCE DATA SYSTEMS CORP.	ADS	Equity
ADSK	AUTODESK, INC.	ADSK	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
ADT	ADT Inc.	ADT	Equity
ADTN	ADTRAN, INC.	ADTN	Equity
ADVM	Adverum Biotechnologies, Inc.	ADVM	Equity
AEE	AMEREN CORPORATION	AEE	Equity
AEG	AEGON N.V.	AEG	Equity
AEIS	Advanced Energy Industries, Inc.	AEIS	Equity
AEL	AMERICAN EQUITY INVESTMENT LIFE HOLDING COMPANY	AEL	Equity
AEM	AGNICO-EAGLE MINES LTD.	AEM	Equity
AEO	AMERICAN EAGLE OUTFITTERS, INC.	AEO	Equity
AEP	AMERICAN ELECTRIC POWER COMPANY, INC.	AEP	Equity
AER	AerCap Holdings NV	AER	Equity
AERI	Aerie Pharmaceuticals, Inc.	AERI	Equity
AES	AES CORP.	AES	Equity
AFH	Atlas Financial Holdings, Inc.	AFH	Equity
AFL	AFLAC INC.	AFL	Equity
AFMD	Affimed N.V.	AFMD	Equity
AFTY	CSOP FTSE China A50 ETF	AFTY	ETF
AG	First Majestic Silver Corp	AG	Equity
AGCO	AGCO CORPORATION	AGCO	Equity
AGEN	Agenus Inc.	AGEN	Equity
AGG	iShares Core U.S. Aggregate Bond ETF	AGG	ETF
AGI	ALAMOS GOLD INC	AGI	Equity
AGIO	Agios Pharmaceuticals Inc	AGIO	Equity
AGN	ALLERGAN, INC.	AGN	Equity
AGNC	AGNC Investment Corp.	AGNC	Equity
AGO	ASSURED GUARANTY LTD.	AGO	Equity
AGQ	PROSHARES ULTRA SILVER	AGQ	ETF
AGRO	AdecoAgro S.A.	AGRO	Equity
AGRX	Agile Therapeutics, Inc.	AGRX	Equity
AHT	Ashford Hospitality Trust, Inc.	AHT	Equity
AI	Arlington Asset Investment Corp.	AI	Equity
AIG	AMERICAN INTERNATIONAL GROUP, INC.	AIG	Equity
AIMT	Aimmune Therapeutics, Inc.	AIMT	Equity
AINV	Apollo Investment Corporation	AINV	Equity
AIR	AAR Corp.	AIR	Equity
AIV	Apartment Investment and Management Company	AIV	Equity
AIZ	Assurant Inc.	AIZ	Equity
AJG	ARTHUR J. GALLAGHER & CO.	AJG	Equity
AJRD	Aerojet Rocketdyne Holdings, Inc.	AJRD	Equity
AKAM	AKAMAI TECHNOLOGIES, INC.	AKAM	Equity
AKBA	Akebia Therapeutics, Inc.	AKBA	Equity
AKG	Asanko Gold Inc.	AKG	Equity
AKRX	Akorn, Inc.	AKRX	Equity
AKS	AK STEEL HOLDING CORPORATION	AKS	Equity
AL	Air Lease Corp	AL	Equity
ALB	Albemarle Corporation	ALB	Equity
ALDR	Alder Biopharmaceuticals Inc.	ALDR	Equity
ALGN	ALIGN TECHNOLOGY INC.	ALGN	Equity
ALGT	Allegiant Travel Company	ALGT	Equity
ALIM	Alimera Sciences Inc.	ALIM	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
ALK	ALASKA AIR GROUP INC	ALK	Equity
ALKS	ALKERMES PLC	ALKS	Equity
ALL	THE ALLSTATE CORPORATION	ALL	Equity
ALLE	ALLEGION PLC	ALLE	Equity
ALLT	Allot Communications Ltd	ALLT	Equity
ALLY	ALLY FINANCIAL INC.	ALLY	Equity
ALNY	ALNYLAM PHARMACEUTICALS INC	ALNY	Equity
ALRM	Alarm.Com Holdings, Inc.	ALRM	Equity
ALSK	Alaska Communications Systems Group, Inc.	ALSK	Equity
ALSN	Allison Transmission Holdings, Inc.	ALSN	Equity
ALV	Autoliv, Inc	ALV	Equity
ALXN	ALEXION PHARMACEUTICALS, INC.	ALXN	Equity
AMAG	AMAG Pharmaceuticals Inc	AMAG	Equity
AMAT	APPLIED MATERIALS, INC.	AMAT	Equity
AMBA	AMBARELLA, INC.	AMBA	Equity
AMBC	AMBAC FINANCIAL GROUP, INC.	AMBC	Equity
AMC	AMC ENTERTAINMENT HOLDINGS, INC.	AMC	Equity
AMCN	AirMedia Group Inc.	AMCN	Equity
AMCX	AMC Networks Inc.	AMCX	Equity
AMD	ADVANCED MICRO DEVICES, INC.	AMD	Equity
AME	AMETEK, INC.	AME	Equity
AMED	AMEDISYS INC	AMED	Equity
AMG	AFFILIATED MANAGERS GROUP INC	AMG	Equity
AMGN	AMGEN INC.	AMGN	Equity
AMH	American Homes 4 Rent	AMH	Equity
AMID	American Midstream Partners, LP	AMID	Equity
AMJ	JP Morgan Alerian MLP Index ETN	AMJ	ETF
AMKR	AMKOR TECHNOLOGY, INC.	AMKR	Equity
AMLP	Alerian MLP ETF	AMLP	ETF
AMN	AMN Healthcare Services, Inc.	AMN	Equity
AMP	AMERIPRISE FINANCIAL INC	AMP	Equity
AMPE	Ampio Pharmaceuticals Inc.	AMPE	Equity
AMPH	Amphastar Pharmaceuticals, Inc.	AMPH	Equity
AMR	Alta Mesa Resources, Inc.	AMR	Equity
AMRN	AMARIN CORPORATION PLC	AMRN	Equity
AMRS	Amyris, Inc.	AMRS	Equity
AMRX	Amneal Pharmaceuticals, Inc.	AMRX	Equity
AMSC	AMERICAN SUPERCONDUCTOR CORP	AMSC	Equity
AMT	AMERICAN TOWER CL A	AMT	Equity
AMTD	AMERITRADE HOLDING CORP	AMTD	Equity
AMWD	American Woodmark Corp.	AMWD	Equity
AMX	America Movil S.A.B. de C.V.	AMX	Equity
AMZN	AMAZON.COM INC.	AMZN	Equity
AN	AUTONATION, INC	AN	Equity
ANAB	AnaptysBio, Inc.	ANAB	Equity
ANDE	The Andersons, Inc.	ANDE	Equity
ANDX	Andeavor Logistics LP	ANDX	Equity
ANET	Arista Networks Inc	ANET	Equity
ANF	ABERCROMBIE & FITCH COMPANY	ANF	Equity
ANFI	AMIRA NATURE FOODS LTD.	ANFI	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
ANGI	Angie's List, Inc.	ANGI	Equity
ANGO	AngioDynamcis, Inc.	ANGO	Equity
ANIK	ANIKA THERAPEUTICS INC.	ANIK	Equity
ANIP	ANI Pharmaceuticals, Inc.	ANIP	Equity
ANSS	ANSYS, Inc.	ANSS	Equity
ANTM	ANTHEM, INC.	ANTM	Equity
AOBC	American Outdoor Brands	AOBC	Equity
AON	Aon plc	AON	Equity
AOS	A.O. Smith Corporation	AOS	Equity
APA	APACHE CORPORATION	APA	Equity
APC	ANADARKO PETROLEUM CORPORATION	APC	Equity
APD	AIR PRODUCTS AND CHEMICALS,INC	APD	Equity
APDN	Applied DNA Sciences Inc.	APDN	Equity
APEI	American Public Education, Inc.	APEI	Equity
APH	Amphenol Corporation	APH	Equity
APHA	Aphria Inc	APHA	Equity
APLE	Apple Hospitality REIT, Inc.	APLE	Equity
APO	Apollo Global Management LLC	APO	Equity
APOG	Apogee Enterprises, Inc.	APOG	Equity
APPS	Digital Turbine, Inc.	APPS	Equity
APRN	Blue Apron Holdings, Inc.	APRN	Equity
APT	ALPHA PRO TECH LTD.	APT	Equity
APTV	Aptiv PLC	APTV	Equity
APU	AmeriGas Partners, L.P.	APU	Equity
AQMS	Aqua Metals, Inc.	AQMS	Equity
AQXP	Aquinox Pharmaceuticals Inc.	AQXP	Equity
AR	ANTERO RESOURCES CORPORATION	AR	Equity
ARAY	Accuray Incorporated	ARAY	Equity
ARCB	ARCBEST CORPORATION	ARCB	Equity
ARCC	Ares Capital Corporation	ARCC	Equity
ARCH	Arch Coal, Inc.	ARCH	Equity
ARCO	ARCOS DORADOS HOLDINGS INC. CLA	ARCO	Equity
ARE	Alexandria Real Estate Equities, Inc.	ARE	Equity
ARES	Ares Management, L.P.	ARES	Equity
AREX	Approach Resources Inc.	AREX	Equity
ARI	Apollo Commercial Real Estate Finance, Inc.	ARI	Equity
ARLP	ALLIANCE RESOURCE PARTNERS	ARLP	Equity
ARMK	Aramark	ARMK	Equity
ARNA	ARENA PHARMACEUTICALS, INC.	ARNA	Equity
ARNC	Arconic Inc.	ARNC	Equity
AROC	Archrock, Inc.	AROC	Equity
ARQL	ArQule, Inc.	ARQL	Equity
ARR	ARMOUR Residential REIT, Inc.	ARR	Equity
ARRY	ARRAY BIOPHARMA, INC.	ARRY	Equity
ARTX	Arotech Corporation	ARTX	Equity
ARW	ARROW ELECTRONICS INC.	ARW	Equity
ARWR	ARROWHEAD RESEARCH CORP.	ARWR	Equity
ASA	ASA Gold and Precious Metals Limited	ASA	Equity
ASC	Ardmore Shipping Corporation	ASC	Equity
ASGN	ASGN Inc.	ASGN	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
ASH	ASHLAND INC	ASH	Equity
ASHR	Deutsche X-Trackers Harvest CSI 300 China A Shares ETF	ASHR	ETF
ASHS	Deutsche X-trackers Harvest CSI 500 China A-Shares Small Cap ETF	ASHS	ETF
ASIX	AdvanSix Inc.	ASIX	Equity
ASMB	Assembly Biosciences, Inc.	ASMB	Equity
ASML	ASML HOLDING NV	ASML	Equity
ASNA	Ascena Retail Group, Inc.	ASNA	Equity
ASND	Ascendis Pharma A/S	ASND	Equity
ASPS	Altisource Portfolio Solutions SA	ASPS	Equity
ASRT	Assertio Therapeutics, Inc.	ASRT	Equity
ASUR	Asure Software, Inc.	ASUR	Equity
AT	Atlantic Power Corporation	AT	Equity
ATEN	A10 Networks, Inc.	ATEN	Equity
ATGE	Adtalem Global Education Inc.	ATGE	Equity
ATH	Athene Holding Ltd.	ATH	Equity
ATHM	Autohome Inc (ADR)	ATHM	Equity
ATHX	ATHERSYS, INC.	ATHX	Equity
ATI	Allegheny Technologies, Inc.	ATI	Equity
ATNM	Actinium Pharmaceuticals, Inc.	ATNM	Equity
ATR	AptarGroup, Inc.	ATR	Equity
ATRA	Atara Biotherapeutics, Inc.	ATRA	Equity
ATRS	Antares Pharma Inc.	ATRS	Equity
ATSG	Air Transport Services Group Inc.	ATSG	Equity
ATU	Actuant Corporation	ATU	Equity
ATUS	Altice USA, Inc.	ATUS	Equity
ATVI	ACTIVISION BLIZZARD, INC.	ATVI	Equity
AU	ANGLOGOLD ASHANTI LTD.	AU	Equity
AUDC	AUDIOCODES LTD.	AUDC	Equity
AUO	AU OPTRONICS CORP	AUO	Equity
AUPH	Aurinia Pharmaceuticals Inc.	AUPH	Equity
AUTO	AutoWeb, Inc.	AUTO	Equity
AUY	YAMANA GOLD, INC.	AUY	Equity
AVAV	Aerovironment Inc	AVAV	Equity
AVB	AVALONBAY COMMUNITIES INC	AVB	Equity
AVD	American Vanguard Corp.	AVD	Equity
AVDL	Avadel Pharmaceuticals plc	AVDL	Equity
AVEO	AVEO Pharmaceuticals, Inc.	AVEO	Equity
AVGO	Broadcom Inc.	AVGO	Equity
AVH	Avianca Holdings S.A.	AVH	Equity
AVID	AVID TECHNOLOGY, INC	AVID	Equity
AVNS	Avanos Medical, Inc.	AVNS	Equity
AVP	AVON PRODUCTS INC.	AVP	Equity
AVT	AVNET INC	AVT	Equity
AVXL	Anavex Life Sciences Corp.	AVXL	Equity
AVY	AVERY DENNISON CORP.	AVY	Equity
AWI	Armstrong World Industries, Inc.	AWI	Equity
AWK	American Water Works Co., Inc.	AWK	Equity
AX	Axos Financial, Inc.	AX	Equity
AXAS	ABRAXAS PETROLEUM CORPORATION	AXAS	Equity
AXDX	ACCELERATE DIAGNOSTICS, INC.	AXDX	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
AXGN	AxoGen, Inc.	AXGN	Equity
AXGT	Axovant Sciences Ltd. (	AXGT	Equity
AXL	AMERICAN AXLE & MFG. HLDNGS	AXL	Equity
AXP	AMERICAN EXPRESS COMPANY	AXP	Equity
AXS	AXIS CAPITAL HOLDINGS LIMITED	AXS	Equity
AXTA	Axalta Coating Systems Ltd.	AXTA	Equity
AXTI	AXT, Inc.	AXTI	Equity
AY	Atlantica Yield plc	AY	Equity
AYI	Acuity Brands, Inc.	AYI	Equity
AYR	Aircastle Limited	AYR	Equity
AYX	Alteryx, Inc.	AYX	Equity
AZN	ASTRAZENECA	AZN	Equity
AZO	AUTOZONE, INC.	AZO	Equity
AZPN	Aspen Technology, Inc.	AZPN	Equity
BA	THE BOEING COMPANY	BA	Equity
BABA	ALIBABA GROUP HOLDING LTD	BABA	Equity
BABY	Natus Medical Inc.	BABY	Equity
BAC	BANK OF AMERICA CORPORATION	BAC	Equity
BAH	Booz Allen Hamilton Holding Corporation	BAH	Equity
BAM	Brookfield Asset Management Inc	BAM	Equity
BANC	Banc of California, Inc.	BANC	Equity
BAP	Credicorp Ltd.	BAP	Equity
BAS	Basic Energy Services, Inc	BAS	Equity
BAX	BAXTER INTERNATIONAL INC.	BAX	Equity
BB	Blackberry Limited	BB	Equity
BBBY	BED BATH & BEYOND INC.	BBBY	Equity
BBD	BANCO BRADESCO S.A.	BBD	Equity
BBDC	Barings BDC, Inc.	BBDC	Equity
BBH	Market Vectors Biotech ETF	BBH	ETF
BBL	BHP Billiton Plc	BBL	Equity
BBSI	Barrett Business Services Inc.	BBSI	Equity
BBT	BB&T CORPORATION	BBT	Equity
BBVA	BANCO BILBAO VIZCAYA	BBVA	Equity
BBW	Build-A-Bear Workshop, Inc	BBW	Equity
BBY	BEST BUY COMPANY, INC.	BBY	Equity
BC	BRUNSWICK CORP	BC	Equity
BCC	Boise Cascade Company	BCC	Equity
BCE	BCE INC	BCE	Equity
BCEI	Bonanza Creek Energy, Inc.	BCEI	Equity
BCLI	Brainstorm Cell Therapeutics Inc.	BCLI	Equity
BCO	THE BRINK'S COMPANY	BCO	Equity
BCOR	Blucora, Inc.	BCOR	Equity
BCOV	Brightcove Inc	BCOV	Equity
BCPC	Balchem Corporation	BCPC	Equity
BCRX	BIOCRYST PHARMACEUTICAS INC	BCRX	Equity
BCS	BARCLAYS PLC	BCS	Equity
BDC	Belden Inc.	BDC	Equity
BDSI	BioDelivery Sciences International, Inc.	BDSI	Equity
BDX	BECTON, DICKINSON AND CO	BDX	Equity
BEAT	BIOTELEMETRY, INC.	BEAT	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
BECN	BEACON ROOFING SUPPLY, INC	BECN	Equity
BEN	FRANKLIN RESOURCES INC.	BEN	Equity
BERY	Berry Plastics Group Inc.	BERY	Equity
BEST	BEST Inc.	BEST	Equity
BFB	Brown Forman Corporation Cl. B (150 shrs)	BFB	Equity
BFR	BBVA BANCO FRANCÉS SA	BFR	Equity
BG	BUNGE LIMITED	BG	Equity
BGCP	BGC Partners Inc	BGCP	Equity
BGFV	Big 5 Sporting Goods Corp.	BGFV	Equity
BGG	Briggs & Stratton Corporation	BGG	Equity
BGNE	BeiGene, Ltd.	BGNE	Equity
BGS	B&G Foods Inc.	BGS	Equity
BHC	Bausch Health Companies Inc.	BHC	Equity
BHF	Brighthouse Financial, Inc.	BHF	Equity
BHGE	Baker Hughes, a GE company	BHGE	Equity
BHP	BHP BILLITON LIMITED	BHP	Equity
BHR	Braemar Hotels & Resorts Inc.	BHR	Equity
BHVN	Biohaven Pharmaceutical Holding Company Ltd.	BHVN	Equity
BIB	PROSHARES ULTRA NASDAQ BIOTECHNOLOGY	BIB	ETF
BID	Sotheby's	BID	Equity
BIDU	BAIDU, INC.	BIDU	Equity
BIG	BIG LOTS INC.	BIG	Equity
BIIB	BIOGEN IDEC INC.	BIIB	Equity
BILI	Bilibili Inc.	BILI	Equity
BIO	Bio-Rad Laboratories, Inc.	BIO	Equity
BIP	Brookfield Infrastructure Partners L.P.	BIP	Equity
BIS	PROSHARES ULTRASHORT NASDAQ BIOTECH	BIS	ETF
BITA	Bitauto Holdings Limited	BITA	Equity
BJ	BJ's Warehouse Holdings, Inc.	BJ	Equity
BJRI	BJ S RESTAURANTS INC	BJRI	Equity
BK	THE BANK OF NEW YORK MELLON CORPORATION	BK	Equity
BKD	Brookdale Senior Living Inc	BKD	Equity
BKE	The Buckle, Inc.	BKE	Equity
BKEP	Blueknight Energy Partners, L.P.	BKEP	Equity
BKF	iShares MSCI BRIC ETF	BKF	Equity
BKH	BLACK HILLS CORPORATION	BKH	Equity
BKLN	PowerShares Senior Loan (ETF)	BKLN	ETF
BKNG	Booking Holdings Inc.	BKNG	Equity
BKS	BARNES & NOBLE, INC.	BKS	Equity
BLCM	Bellicum Pharmaceuticals, Inc.	BLCM	Equity
BLD	TopBuild Corp.	BLD	Equity
BLDP	BALLARD POWER SYSTEMS INC	BLDP	Equity
BLDR	Builders FirstSource Inc.	BLDR	Equity
BLK	BLACKROCK INC	BLK	Equity
BLKB	Blackbaud Inc.	BLKB	Equity
BLL	Ball Corporation	BLL	Equity
BLMN	Bloomin Brands Inc.	BLMN	Equity
BLUE	bluebird bio Inc	BLUE	Equity
BMA	Banco Macro S.A.	BMA	Equity
BMCH	BMC Stock Holdings, Inc.	BMCH	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
BMO	Bank of Montreal	BMO	Equity
BMRN	BIOMARIN PHARMACEUTICAL INC.	BMRN	Equity
BMS	BEMIS COMPANY	BMS	Equity
BMY	BRISTOL-MYERS SQUIBB COMPANY	BMY	Equity
BNED	Barnes & Noble Education, Inc.	BNED	Equity
BNFT	BENEFITFOCUS, INC.	BNFT	Equity
BNO	United States Brent Oil ETF	BNO	ETF
BNS	Bank of Nova Scotia	BNS	Equity
BOIL	PROSHARES ULTRA DJ-UBS NATURAL GAS	BOIL	ETF
BOKF	Bok Financial Corporation	BOKF	Equity
BOLD	Audentes Therapeutics, Inc.	BOLD	Equity
BOOT	Boot Barn Holdings, Inc.	BOOT	Equity
BOTZ	Global X Robotics & Artfcl Intlgnc ETF	BOTZ	ETF
BOX	Box, Inc.	BOX	Equity
BP	BP PLC	BP	Equity
BPFH	Boston Private Financial Holdings Inc.	BPFH	Equity
BPL	Buckeye Partners, L.P.	BPL	Equity
BPMC	Blueprint Medicines Corporation	BPMC	Equity
BPOP	Popular Inc. (10 shrs)	BPOP	Equity
BPT	BP PRUDHOE BAY ROYALTY TRUST	BPT	Equity
BPY	Brookfield Property Partners L.P.	BPY	Equity
BR	Broadridge Financial Solutions, Inc.	BR	Equity
BREW	Craft Brew Alliance, Inc.	BREW	Equity
BRFS	BRF - Brasil Foods SA	BRFS	Equity
BRKB	BERKSHIRE HATHAWAY INC.	BRKB	Equity
BRKR	Bruker Corporation	BRKR	Equity
BRKS	Brooks Automation, Inc.	BRKS	Equity
BRX	Brixmor Property Group Inc	BRX	Equity
BRZU	Direxion Daily Brazil Bull 3X ETF	BRZU	ETF
BSBR	Banco Santander Brasil SA	BSBR	Equity
BSQR	BSQUARE Corp.	BSQR	Equity
BSX	BOSTON SCIENTIFIC CORPORATION	BSX	Equity
BTE	Baytex Energy Corp.	BTE	Equity
BTG	B2Gold Corp.	BTG	Equity
BTI	British American Tobacco PLC	BTI	Equity
BTU	Peabody Energy Corporation	BTU	Equity
BTX	Biotime, Inc.	BTX	Equity
BUD	Anheuser-Busch InBev	BUD	Equity
BURL	Burlington Stores Inc	BURL	Equity
BVN	COMPANIA DE MINAS BUENAVENTURA S.A.-ADR	BVN	Equity
BWA	BORGWARNER INC.	BWA	Equity
BWXT	BWX Technologies, Inc.	BWXT	Equity
BX	THE BLACKSTONE GROUP LP	BX	Equity
BXMT	Blackstone Mortgage Trust, Inc.	BXMT	Equity
BXP	BOSTON PROPERTIES INC	BXP	Equity
BYD	BOYD GAMING CORP.	BYD	Equity
BYND	Beyond Meat, Inc.	BYND	Equity
BZH	BEAZER HOMES USA INC.	BZH	Equity
BZQ	ProShares UltraShort MSCI Brazil Capped	BZQ	ETF
BZUN	Baozun Inc.	BZUN	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
C	CITIGROUP, INC.	C	Equity
CACC	Credit Acceptance Corp.	CACC	Equity
CACI	CACI INTERNATIONAL, INC.	CACI	Equity
CAG	ConAgra Brands, Inc.	CAG	Equity
CAH	CARDINAL HEALTH INC	CAH	Equity
CAI	CAI International, Inc.	CAI	Equity
CAKE	THE CHEESECAKE FACTORY	CAKE	Equity
CAL	Caleres, Inc.	CAL	Equity
CALA	Calithera Biosciences, Inc.	CALA	Equity
CALM	Cal-Maine Foods, Inc.	CALM	Equity
CALX	Calix, Inc.	CALX	Equity
CAMP	CalAmp Corp	CAMP	Equity
CAMT	Camtek Ltd.	CAMT	Equity
CAPL	CROSSAMERICA PARTNERS LP	CAPL	Equity
CAR	Avis Budget Group Inc	CAR	Equity
CARA	Cara Therapeutics Inc.	CARA	Equity
CARB	Carbonite, Inc.	CARB	Equity
CARG	CarGurus, Inc.	CARG	Equity
CARS	Cars.com Inc.	CARS	Equity
CASA	Casa Systems, Inc.	CASA	Equity
CASY	Casey's General Stores, Inc.	CASY	Equity
CAT	CATERPILLAR INC.	CAT	Equity
CATM	Cardtronics, Inc.	CATM	Equity
CB	Chubb Limited	CB	Equity
CBAY	CymaBay Therapeutics, Inc.	CBAY	Equity
CBB	Cincinnati Bell Inc.	CBB	Equity
CBIO	Catalyst Biosciences, Inc.	CBIO	Equity
CBL	CBL & Associates Properties, Inc.	CBL	Equity
CBM	Cambrex Corporation	CBM	Equity
CBOE	CBOE HOLDINGS, INC.	CBOE	Equity
CBPO	China Biologic Products, Inc.	CBPO	Equity
CBRE	CBRE Group, Inc.	CBRE	Equity
CBRL	Cracker Barrel Old Country Store	CBRL	Equity
CBS	CBS CORPORATION	CBS	Equity
CBT	CABOT CORPORATION	CBT	Equity
CC	The Chemours Company	CC	Equity
CCEP	Coca-Cola European Partners plc	CCEP	Equity
CCI	CROWN CASTLE INTER.	CCI	Equity
CCJ	CAMECO CORPORATION	CCJ	Equity
CCK	CROWN HOLDINGS INC.	CCK	Equity
CCL	CARNIVAL CORPORATION	CCL	Equity
CCLP	CSI Compressco LP	CCLP	Equity
CCMP	Cabot Microelectronics Corporation	CCMP	Equity
CCOI	Cogent Communications Holdings, Inc.	CCOI	Equity
CCRN	Cross Country Healthcare, Inc.	CCRN	Equity
CCS	Century Communities, Inc.	CCS	Equity
CCXI	CHEMOCENTRYX, INC.	CCXI	Equity
CDE	COEUR d' ALENE MINES CORP	CDE	Equity
CDEV	Centennial Resource Development, Inc.	CDEV	Equity
CDK	CDK GLOBAL, INC.	CDK	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
CDMO	Avid Bioservices, Inc.	CDMO	Equity
CDNS	CADENCE DESIGN SYSTEMS, I	CDNS	Equity
CDW	CDW CORPORATION	CDW	Equity
CDZI	Cadiz Inc.	CDZI	Equity
CE	CELANESE CORPORATION	CE	Equity
CECO	CAREER EDUCATION CORP	CECO	Equity
CELG	CELGENE CORPORATION	CELG	Equity
CENX	CENTURY ALUMINUM COMPANY	CENX	Equity
CEO	CNOOC LIMITED, ADS	CEO	Equity
CEQP	CRESTWOOD EQUITY PARTNERS LP	CEQP	Equity
CERN	CERNER CORPORATION	CERN	Equity
CERS	CERUS CORPORATION	CERS	Equity
CEVA	Ceva Inc	CEVA	Equity
CF	CF INDUSTRIES HOLDINGS, INC.	CF	Equity
CFG	Citizens Financial Group, Inc.	CFG	Equity
CFR	CULLEN/FROST BANKERS INC.	CFR	Equity
CFX	Colfax Corporation	CFX	Equity
CG	The Carlyle Group LP	CG	Equity
CGA	China Green Agriculture, Inc.	CGA	Equity
CGC	Canopy Growth Corporation	CGC	Equity
CGEN	Compugen Ltd.	CGEN	Equity
CGNX	COGNEX CORPORATION	CGNX	Equity
CHAD	Direxion Dly CSI 300 Chn A Shr Br 1X ETF	CHAD	ETF
CHAU	Direxion Dly CSI 300 Chn A Shr Br 2X ETF	CHAU	ETF
CHD	CHURCH & DWIGHT CO.	CHD	Equity
CHE	Chemed Corporation	CHE	Equity
CHGG	CHEGG, INC	CHGG	Equity
CHH	Choice Hotels International Inc.	CHH	Equity
CHIX	Global X China Financials ETF	CHIX	ETF
CHK	CHESAPEAKE ENERGY CORPORATION	CHK	Equity
CHKP	CHECK POINT SOFTWARE TECHNOLOGIES LTD.	CHKP	Equity
CHKR	Chesapeake Granite Wash Trust	CHKR	Equity
CHL	CHINA MOBILE LIMITED	CHL	Equity
CHRS	Coherus BioSciences, Inc.	CHRS	Equity
CHRW	CH ROBINSON WORLDWIDE INC.	CHRW	Equity
CHS	CHICO'S FAS, INC.	CHS	Equity
CHTR	Charter Communications Inc. Cl A	CHTR	Equity
CHU	China Unicom (Hong Kong) Ltd.	CHU	Equity
CHUY	CHUY'S HOLDINGS, INC.	CHUY	Equity
CI	CIGNA CORPORATION	CI	Equity
CIA	Citizens Inc.	CIA	Equity
CIEN	CIENA CORPORATION	CIEN	Equity
CIG	Companhia Energetica de Minas Gerais - CEMIG (125)	CIG	Equity
CIM	CHIMERA INVESTMENT CORPORATION	CIM	Equity
CINF	Cincinnati Financial Corp.	CINF	Equity
CIT	CIT Group, Inc.	CIT	Equity
CKH	SEACOR Holdings, Inc.	CKH	Equity
CL	COLGATE-PALMOLIVE COMPANY	CL	Equity
CLAR	Clarus Corporation	CLAR	Equity
CLB	Core Laboratories N.V.	CLB	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
CLDR	Cloudera, Inc.	CLDR	Equity
CLDT	Chatham Lodging Trust	CLDT	Equity
CLDX	Celldex Therapeutics, Inc.	CLDX	Equity
CLF	CLIFFS NATURAL RESOURCES INC.	CLF	Equity
CLFD	Clearfield, Inc.	CLFD	Equity
CLGX	CoreLogic Inc.	CLGX	Equity
CLH	CLEAN HARBORS INC	CLH	Equity
CLIR	ClearSign Combustion Corporation	CLIR	Equity
CLLS	Cellectis S.A.	CLLS	Equity
CLMT	Calumet Specialty Products Partners, L.P.	CLMT	Equity
CLNE	CLEAN ENERGY FUELS CORPORATION	CLNE	Equity
CLNY	Colony Capital, Inc.	CLNY	Equity
CLR	CONTINENTAL RESOURCES, INC.	CLR	Equity
CLS	Celestica, Inc.	CLS	Equity
CLSD	Clearside Biomedical, Inc.	CLSD	Equity
CLUB	Town Sports International Holdings Inc.	CLUB	Equity
CLVS	CLOVIS ONCOLOGY, INC.	CLVS	Equity
CLW	Clearwater Paper Corporation	CLW	Equity
CLX	CLOROX CO	CLX	Equity
CM	Canadian Imperial Bank of Commerce	CM	Equity
CMA	COMERICA, INC.	CMA	Equity
CMC	COMMERCIAL METALS COMPANY	CMC	Equity
CMCM	Cheetah Mobile Inc.	CMCM	Equity
CMCSA	COMCAST CORPORATION	CMCSA	Equity
CMD	Cantel Medical Corporation	CMD	Equity
CME	CME GROUP INC.	CME	Equity
CMG	CHIPOTLE MEXICAN GRILL, INC.	CMG	Equity
CMI	CUMMINS INC.	CMI	Equity
CMP	Compass Minerals International, Inc.	CMP	Equity
CMPR	CIMPRESS N.V.	CMPR	Equity
CMRE	Costamare Inc.	CMRE	Equity
CMRX	CHIMERIX, INC.	CMRX	Equity
CMS	CMS ENERGY CORPORATION	CMS	Equity
CMTL	COMTECH TELECOMMUNICATION	CMTL	Equity
CNAT	CONATUS PHARMACEUTICALS INC.	CNAT	Equity
CNC	CENTENE CORP	CNC	Equity
CNCE	Concert Pharmaceuticals, Inc.	CNCE	Equity
CNDT	Conduent Incorporated	CNDT	Equity
CNET	Chinanet Online Holdings, Inc.	CNET	Equity
CNHI	CNH Industrial N.V.	CNHI	Equity
CNI	CANADIAN NATIONAL RAILWAY	CNI	Equity
CNK	Cinemark Holdings, Inc.	CNK	Equity
CNO	CNO Financial Group, Inc.	CNO	Equity
CNP	CENTERPOINT ENERGY, INC.	CNP	Equity
CNQ	CANADIAN NATURAL RESOURCES LIMITED	CNQ	Equity
CNR	Cornerstone Building Brands, Inc.	CNR	Equity
CNSL	Consolidated Communications Holdings, Inc.	CNSL	Equity
CNX	CNX Resources Corporation	CNX	Equity
CNXM	CNX Midstream Partners LP	CNXM	Equity
CODI	Compass Diversified Holdings LLC	CODI	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
COF	CAPITAL ONE FINANCIAL CORPORATION	COF	Equity
COG	CABOT OIL & GAS CORPORATION	COG	Equity
COHR	COHERENT,INC	COHR	Equity
COHU	Cohu, Inc.	COHU	Equity
COLL	Collegium Pharmaceutical, Inc.	COLL	Equity
COLM	COLUMBIA SPORTWEAR CO.	COLM	Equity
COMM	COMMSCOPE HOLDING CO, INC.	COMM	Equity
CONE	CyrusOne Inc.	CONE	Equity
CONN	Conn's, Inc.	CONN	Equity
COO	Cooper Companies, Inc.	COO	Equity
COP	CONOCOPHILLIPS	COP	Equity
COR	CoreSite Realty Corporation	COR	Equity
CORE	Core-Mark Holding Company, Inc.	CORE	Equity
CORN	TEUCRIUM COMMODITY TRUST CORN FUND SHARES ETF	CORN	ETF
CORR	CorEnergy Infrastructure Trust, Inc.	CORR	Equity
CORT	Corcept Therapeutics Incorporated	CORT	Equity
CORV	Correvio Pharma Corp	CORV	Equity
COST	COSTCO WHOLESALE CORPORATION	COST	Equity
COT	Cott Corporation	COT	Equity
COTY	COTY INC.	COTY	Equity
COUP	Coupa Software Incorporated	COUP	Equity
COWN	Cowen Group, Inc.	COWN	Equity
CP	Canadian Pacific Railway Limited	CP	Equity
CPA	Copa Holdings SA	CPA	Equity
CPB	CAMPBELL SOUP CO	CPB	Equity
CPE	CALLON PETROLEUM COMPANY	CPE	Equity
CPG	Crescent Point Energy Corp.	CPG	Equity
CPRI	Capri Holdings Limited (	CPRI	Equity
CPRT	COPART INC	CPRT	Equity
CPRX	CATALYST PHARMACEUTICAL PARTNES INC.	CPRX	Equity
CPSS	Consumer Portfolio Services, Inc.	CPSS	Equity
CQP	Cheniere Energy Ptnrs L.P.	CQP	Equity
CR	Crane Co.	CR	Equity
CRBP	Corbus Pharmaceuticals Holdings, Inc.	CRBP	Equity
CRC	California Resources Corporation	CRC	Equity
CRCM	Care.com, Inc.	CRCM	Equity
CREE	CREE, INC.	CREE	Equity
CRESY	Cresud Sociedad Anonima Comercial, Inmobiliaria, Financiera y Agropecuaria	CRESY	Equity
CRH	CRH plc	CRH	Equity
CRI	CARTER'S , INC.	CRI	Equity
CRK	COMSTOCK RESOURCES INC.	CRK	Equity
CRL	Charles River Laboratories International, Inc.	CRL	Equity
CRM	SALESFORCE.COM, INC	CRM	Equity
CRMD	CorMedix Inc.	CRMD	Equity
CRNT	Ceragon Networks Ltd.	CRNT	Equity
CRON	Cronos Group Inc.	CRON	Equity
CROX	CROCS, INC.	CROX	Equity
CRR	CARBO CERAMICS INC	CRR	Equity
CRS	CARPENTER TECHNOLOGY CORP.	CRS	Equity
CRSP	CRISPR Therapeutics AG	CRSP	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
CRTO	CRITEO SA	CRTO	Equity
CRUS	CIRRUS LOGIC INC.	CRUS	Equity
CRY	CryoLife Inc	CRY	Equity
CRZO	CARRIZO OIL & GAS, INC	CRZO	Equity
CS	CREDIT SUISSE GROUP AG	CS	Equity
CSCO	CISCO SYSTEMS, INC.	CSCO	Equity
CSGS	CSG Systems International Inc.	CSGS	Equity
CSII	Cardiovascular Systems Inc.	CSII	Equity
CSIQ	Canadian Solar Inc	CSIQ	Equity
CSLT	CASTLIGHT HEALTH, INC.	CSLT	Equity
CSOD	CORNERSTONE ONDEMAND, INC.	CSOD	Equity
CSTE	CAESARSTONE SDOT-YAM LTD.	CSTE	Equity
CSTM	CONSTELLIUM N.V	CSTM	Equity
CSU	Capital Senior Living Corp.	CSU	Equity
CSV	Carriage Services, Inc.	CSV	Equity
CSX	CSX CORPORATION	CSX	Equity
CTAS	CINTAS CORP.	CTAS	Equity
CTB	COOPER TIRE & RUBBER CO.	CTB	Equity
CTG	Computer Task Group Incorporated	CTG	Equity
CTIC	Cell Therapeutics, Inc. (20 Shrs)	CTIC	Equity
CTL	CENTURYLINK, INC.	CTL	Equity
CTLT	Catalent, Inc.	CTLT	Equity
CTRL	CONTROL4 CORPORATION	CTRL	Equity
CTRP	CTRIP.COM INTERNATIONAL LTD.	CTRP	Equity
CTSH	COGNIZANT TECHNOLOGY SOLUTIONS CORPORATION	CTSH	Equity
CTSO	CYTOSORBENTS CORPORATION	CTSO	Equity
CTXS	CITRIX SYSTEMS, INC.	CTXS	Equity
CUBE	CubeSmart	CUBE	Equity
CUR	NEURALSTEM, INC.	CUR	Equity
CURE	Direxion Daily Healthcare Bull 3X ETF	CURE	ETF
CUTR	CUTERA INC	CUTR	Equity
CVA	COVANTA HOLDING CORPORATION	CVA	Equity
CVE	Cenovus Energy Inc.	CVE	Equity
CVEO	CIVEO CORPORATION	CVEO	Equity
CVGW	CALAVO GROWERS INC.	CVGW	Equity
CVI	CVR Energy, Inc.	CVI	Equity
CVLT	Commvault Systems Inc	CVLT	Equity
CVNA	Carvana Co.	CVNA	Equity
CVS	CVS CAREMARK CORPORATION	CVS	Equity
CVX	CHEVRON CORPORATION	CVX	Equity
CWB	SPDR Barclays Convertible Secs ETF	CWB	ETF
CWEN	Clearway Energy, Inc.	CWEN	Equity
CWENA	Clearway Energy, Inc. Class A	CWENA	Equity
CWH	Camping World Holdings, Inc.	CWH	Equity
CWST	Casella Waste Systems Inc.	CWST	Equity
CX	CEMEX, S.A.B. DE C.V.	CX	Equity
CXDC	China XD Plastics Company Limited	CXDC	Equity
CXO	Concho Resources, Inc.	CXO	Equity
CXW	CORRECTIONS CORPORATION OF AMERICA	CXW	Equity
CY	CYPRESS SEMICONDUCTOR CORPORATION	CY	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
CYB	WisdomTree Chinese Yuan Strategy ETF	CYB	ETF
CYBR	CYBERARK SOFTWARE, LTD.	CYBR	Equity
CYD	China Yuchai International Limited	CYD	Equity
CYH	COMMUNITY HEALTH SYSTEMS, INC.	CYH	Equity
CYOU	CHANGYOU.COM LIMITED	CYOU	Equity
CYTK	CYTOKINETICS, INCORPORATED	CYTK	Equity
CYTR	CytRx Corp.	CYTR	Equity
CZR	Caesars Entertainment Corporation	CZR	Equity
CZZ	Cosan Limited	CZZ	Equity
D	DOMINION RESOURCES	D	Equity
DAKT	DAKTRONICS INC.	DAKT	Equity
DAL	DELTA AIR LINES INC.	DAL	Equity
DAN	Dana Holding Corporation	DAN	Equity
DAR	Darling International, Inc.	DAR	Equity
DATA	TABLEAU SOFTWARE INC.	DATA	Equity
DB	DEUTSCHE BANK AG	DB	Equity
DBA	POWERSHARES DB AGRICULTURE	DBA	ETF
DBB	PowerShares DB Base Metals ETF	DBB	ETF
DBC	PoweShares DB Commodity Index Tracking Fund	DBC	ETF
DBD	DIEBOLD, INCORPORATED	DBD	Equity
DBI	Designer Brands Inc. (	DBI	Equity
DBO	PowerShares DB Oil Fund	DBO	ETF
DBVT	DBV Technologies S.A.	DBVT	Equity
DBX	Dropbox, Inc.	DBX	Equity
DCI	Donaldson Company, Inc.	DCI	Equity
DCP	DCP Midstream, LP	DCP	Equity
DD	DuPont de Nemours, Inc.	DWDP	Equity
DDD	3D SYSTEMS CORPORATION	DDD	Equity
DDM	ProShares Ultra Dow30	DDM	ETF
DDS	DILLARD'S INC	DDS	Equity
DE	DEERE & COMPANY	DE	Equity
DECK	DECKERS OUTDOOR CORPORATION	DECK	Equity
DELL	Dell Technologies, Inc.	DELL	Equity
DEM	WisdomTree Emerging Markets Eq Inc ETF	DEM	ETF
DENN	Denny's Corp.	DENN	Equity
DEO	DIAGEO PLC	DEO	Equity
DERM	Dermira, Inc.	DERM	Equity
DF	DEAN FOODS CO.	DF	Equity
DFE	WisdomTree Europe SmallCap Dividend Fund	DFE	ETF
DFRG	Del Frisco's Restaurant Group, Inc.	DFRG	Equity
DFS	DISCOVER FINANCIAL SERVICES	DFS	Equity
DG	DOLLAR GENERAL CORPORATION	DG	Equity
DGX	QUEST DIAGNOSTICS INC	DGX	Equity
DHI	DR HORTON INC.	DHI	Equity
DHR	DANAHER CORPORATION	DHR	Equity
DHT	DHT Holdings, Inc.	DHT	Equity
DHX	DHI Group, Inc.	DHX	Equity
DIA	SPDR DOW JONES INDUSTRIAL AVERAGE	DIA	ETF
DIG	ProShares Ultra Oil & Gas	DIG	ETF
DIN	DineEquity, Inc	DIN	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
DIOD	Diodes Incorporated	DIOD	Equity
DIS	THE WALT DISNEY COMPANY	DIS	Equity
DISCA	Discovery Communications, Inc. Class A	DISCA	Equity
DISCK	Discovery Communications, Inc.	DISCK	Equity
DISH	DISH NETWORK CORPORATION	DISH	Equity
DK	Delek US Holdings, Inc.	DK	Equity
DKL	Delek Logistics Partners LP	DKL	Equity
DKS	DICK'S SPORTING GOODS INC.	DKS	Equity
DLB	DOLBY LABORATORIES, INC.	DLB	Equity
DLNG	Dynagas LNG Partners LP	DLNG	Equity
DLPH	Delphi Technologies PLC	DLPH	Equity
DLR	Digital Realty Trust Inc	DLR	Equity
DLTH	Duluth Holdings Inc.	DLTH	Equity
DLTR	DOLLAR TREE, INC.	DLTR	Equity
DLX	DELUXE CORPORATION	DLX	Equity
DMLP	Dorchester Minerals LP	DMLP	Equity
DNKN	DUNKIN' BRANDS GROUP, INC.	DNKN	Equity
DNN	Denison Mines Corp.	DNN	Equity
DNOW	NOW, INC.	DNOW	Equity
DNR	DENBURY RESOURCES INC.	DNR	Equity
DO	DIAMOND OFFSHORE DRILLING, INC	DO	Equity
DOCU	Docusign Inc.	DOCU	Equity
DOG	ProShares Short Dow30	DOG	ETF
DOV	DOVER CORPORATION	DOV	Equity
DOW	Dow Inc.	DOW	Equity
DOX	AMDOCS LTD	DOX	Equity
DPLO	Diplomat Pharmacy, Inc.	DPLO	Equity
DPZ	DOMINO'S PIZZA INC	DPZ	Equity
DQ	Daqo New Energy Corp	DQ	Equity
DRD	DRDGOLD Ltd.	DRD	Equity
DRI	DARDEN RESTAURANTS, INC.	DRI	Equity
DRIP	Direxion Dly S&P Oil&Gs Ex&Prd Br 3X ETF	DRIP	ETF
DRN	Direxion Daily Real Estate Bull 3x ETF	DRN	ETF
DRQ	DRIL-QUIP INC	DRQ	Equity
DRRX	DURECT Corporation	DRRX	Equity
DRV	Direxion Daily Real Estate Bear 3x ETF	DRV	ETF
DS	Drive Shack Inc.	DS	Equity
DSX	DIANA SHIPPING INC	DSX	Equity
DTE	DTE Energy Company	DTE	Equity
DUG	ProShares UltraShort Oil & Gas	DUG	ETF
DUK	DUKE ENERGY CORPORATION	DUK	Equity
DUST	Direxion Daily Gold Miners Bear 3X Shares	DUST	ETF
DVA	DaVita HealthCare Partners Inc.	DVA	Equity
DVAX	DYNAVAX TECHNOLOGIES CORPORATION	DVAX	Equity
DVN	DEVON ENERGY CORPORATION	DVN	Equity
DVY	ISHARES DJ SELECT DIVIDEND	DVY	ETF
DXC	DXC Technology Company	DXC	Equity
DXCM	DexCom, Inc.	DXCM	Equity
DXD	ProShares UltraShort Dow30 (25 Shares)	DXD	ETF
DXJ	WISDOMTREE JAPAN HEDGED EQUITY FUND	DXJ	ETF

Und Symbol	Company Name	Deriv Symbol	Inst Type
DXPE	DXP Enterprises, Inc.	DXPE	Equity
DY	DYCOM INDUSTRIES INC.	DY	Equity
E	ENI SpA	E	Equity
EA	ELECTRONIC ARTS INC.	EA	Equity
EAF	GrafTech International Ltd.	EAF	Equity
EAT	BRINKER INT'L, INC.	EAT	Equity
EBAY	EBAY INC.	EBAY	Equity
EBIX	Ebix, Inc.	EBIX	Equity
EBS	Emergent Biosolutions, Inc.	EBS	Equity
EC	Ecopetrol SA	EC	Equity
ECA	ENCANA CORPORATION	ECA	Equity
ECH	iShares MSCI Chile ETF	ECH	ETF
ECHO	Echo Global Logistics, Inc.	ECHO	Equity
ECL	ECOLAB INC.	ECL	Equity
ECOM	CHANNELADVISOR CORPORATION	ECOM	Equity
ECPG	Encore Capital Group Inc	ECPG	Equity
ED	CON EDISON	ED	Equity
EDAP	EDAP TMS S.A.	EDAP	Equity
EDC	Direxion Daily Emerging Markets Bull 3X Shares (20	EDC	ETF
EDIT	Editas Medicine, Inc.	EDIT	Equity
EDU	NEW ORIENTAL EDUCATION & TECHNOLOGY GROUP	EDU	Equity
EDZ	Direxion Daily Emerging Markets Bear 3X Share	EDZ	ETF
EEFT	EURONET WORLDWIDE, INC.	EEFT	Equity
EEM	ISHARES MSCI EMERGING MARKETS INDEX	EEM	ETF
EEV	ProShares UltraShort MSCI Emerging Mkts	EEV	ETF
EFA	ISHARES MSCI EAFE INDEX	EFA	ETF
EFV	iShares Edge MSCI Min Vol EAFE	EFV	ETF
EFX	EQUIFAX INC.	EFX	Equity
EGHT	8x8 Inc	EGHT	Equity
EGO	ELDORADO GOLD CORPORATION	EGO	Equity
EGOV	NIC Inc.	EGOV	Equity
EGRX	Eagle Pharmaceuticals Inc.	EGRX	Equity
EGY	VAALCO ENERGY INC	EGY	Equity
EHC	Encompass Health Corporation	EHC	Equity
EHTH	eHealth, Inc.	EHTH	Equity
EIGI	Endurance International Group Holdings, Inc.	EIGI	Equity
EIX	EDISON INTERNATIONAL	EIX	Equity
EL	THE EST	EL	Equity
ELF	e.l.f. Beauty, Inc.	ELF	Equity
ELGX	Endologix, Inc.	ELGX	Equity
ELS	Equity Lifestyle Properties, Inc.	ELS	Equity
ELY	CALLAWAY GOLF CO	ELY	Equity
EMB	iShares J.P. Morgan USD Emerging Markets Bond ETF	EMB	ETF
EMKR	EMCORE Corporation	EMKR	Equity
EMN	EASTMAN CHEMICAL COMPANY	EMN	Equity
EMR	EMERSON ELECTRIC COMPANY	EMR	Equity
ENB	Enbridge Inc	ENB	Equity
ENBL	ENABLE MIDSTREAM PARTNERS, LP	ENBL	Equity
ENDP	ENDO HEALTH SOLUTIONS INC.	ENDP	Equity
ENLC	EnLink Midstream, LLC	ENLC	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
ENPH	Enphase Energy Inc.	ENPH	Equity
ENR	Energizer Holdings, Inc.	ENR	Equity
ENS	Energys	ENS	Equity
ENT	GLOBAL EAGLE ENTERTAINMENT INC.	ENT	Equity
ENTA	Enanta Pharmaceuticals, Inc.	ENTA	Equity
ENTG	Entegris, Inc.	ENTG	Equity
ENV	Envestnet, Inc.	ENV	Equity
ENVA	Enova International, Inc.	ENVA	Equity
ENZ	ENZO BIOCHEM INC.	ENZ	Equity
EOG	EOG RESOURCES, INC.	EOG	Equity
EPAM	EPAM Systems, Inc.	EPAM	Equity
EPAY	Bottomline Technologies (de), Inc.	EPAY	Equity
EPC	Edgewell Personal Care Company	EPC	Equity
EPD	ENTERPRISE PRODUCTS PARTNERS L.P.	EPD	Equity
EPI	WisdomTree India Earning Fund	EPI	ETF
EPR	EPR Properties	EPR	Equity
EPV	ProShares UltraShort FTSE Europe	EPV	ETF
EPZM	Epizyme, Inc.	EPZM	Equity
EQC	EQUITY COMMONWEALTH	EQC	Equity
EQH	AXA Equitable Holdings, Inc.	EQH	Equity
EQIX	EQUINIX, INC.	EQIX	Equity
EQM	EQT Midstream Partners LP	EQM	Equity
EQNR	Equinor ASA	EQNR	Equity
EQR	EQUITY RESIDENTIAL	EQR	Equity
EQT	EQT Corporation	EQT	Equity
ERF	Enerplus Corporation	ERF	Equity
ERI	Eldorado Resorts, Inc.	ERI	Equity
ERIC	Ericsson	ERIC	Equity
ERII	Energy Recovery Inc.	ERII	Equity
ERJ	Embraer S.A.	ERJ	Equity
EROS	Eros International Plc	EROS	Equity
ERX	DIREXION DAILY ENERGY BULL 3X SHARES	ERX	ETF
ERY	Direxionshares Daily Energy Bear 3X Shares	ERY	ETF
ES	Eversource Energy	ES	Equity
ESI	Element Solutions Inc.	ESI	Equity
ESNT	Essent Group Ltd.	ESNT	Equity
ESPR	Esperion Therapeutics, Inc.	ESPR	Equity
ESRT	Empire State Realty Trust, Inc.	ESRT	Equity
ESS	Essex Property Trust Inc.	ESS	Equity
ESV	ENSCO PLC	ESV	Equity
ET	Energy Transfer LP	ET	Equity
ETFC	E*TRADE FINANCIAL CORPORATION	ETFC	Equity
ETH	Ethan Allen Interiors Inc.	ETH	Equity
ETM	Entercom Communications Corp.	ETM	Equity
ETN	EATON CORPORATION PLC	ETN	Equity
ETR	ENERGY CORPORATION	ETR	Equity
ETSY	Etsy, Inc.	ETSY	Equity
EUFN	iShares MSCI Europe Financials ETF	EUFN	ETF
EUO	PROSHARES ULTRASHORT EURO	EUO	ETF
EV	EATON VANCE CORP	EV	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
EVC	Entravision Communications Corporation	EVC	Equity
EVH	Evolent Health, Inc.	EVH	Equity
EVR	Evercore Partners Inc.	EVR	Equity
EVRG	Evergy, Inc.	EVRG	Equity
EVRI	Everi Holdings Inc.	EVRI	Equity
EW	EDWARDS LIFESCIENCES CORP.	EW	Equity
EWA	ISHARES MSCI AUSTRALIA INDEX	EWA	ETF
EWC	iShares Canada Index ETF	EWC	ETF
EWG	iShares MSCI Germany Index Fund ETF	EWG	ETF
EWH	ISHARES MSCI HONG KONG INDEX	EWH	ETF
EWI	iShares MSCI Italy Index Fund	EWI	ETF
EWJ	ISHARES MSCI JAPAN INDEX	EWJ	ETF
EWM	ISHARES MSCI MALAYSIA INDEX ETF	EWM	ETF
EWP	iShares MSCI Spain Capped	EWP	ETF
EWQ	iShares MSCI France	EWQ	ETF
EWS	iShares MSCI Singapore	EWS	ETF
EWT	ISHARES TAIWAN INDEX ETF	EWT	ETF
EWU	iShares MSCI United Kingdom Index ETF	EWU	ETF
EWV	ISHARES MSCI MEXICO CAPPED ETF	EWV	ETF
EWY	ISHARES MSCI SOUTH KOREA CAPPED INDEX	EWY	ETF
EWZ	ISHARES MSCI BRAZIL CAPPED INDEX	EWZ	ETF
EXAS	Exact Sciences Corp.	EXAS	Equity
EXC	EXELON CORPORATION	EXC	Equity
EXEL	EXELIXIS, INC.	EXEL	Equity
EXK	Endeavour Silver Corp.	EXK	Equity
EXP	EAGLE MATERIALS INC.	EXP	Equity
EXPD	EXPEDITORS INTERNATIONAL	EXPD	Equity
EXPE	EXPEDIA INC.	EXPE	Equity
EXPR	EXPRESS INC.	EXPR	Equity
EXR	Extra Space Storage Inc.	EXR	Equity
EXTR	EXTREME NETWORKS, INC.	EXTR	Equity
EYES	Second Sight Medical Products, Inc.	EYES	Equity
EYPT	EyePoint Pharmaceuticals, Inc.	EYPT	Equity
EZA	iShares MSCI South Africa Index	EZA	ETF
EZPW	EZCORP, INC	EZPW	Equity
EZU	iShares MSCI Eurozone	EZU	ETF
F	FORD MOTOR COMPANY	F	Equity
FANG	DIAMONDBACK ENERGY, INC.	FANG	Equity
FAS	DIREXION DAILY FINANCIAL BULL 3X SHARES	FAS	ETF
FAST	FASTENAL COMPANY	FAST	Equity
FATE	Fate Therapeutics, Inc.	FATE	Equity
FAZ	DIREXION DAILY FINANCIAL BEAR 3X SHARES	FAZ	ETF
FB	FACEBOOK, INC.	FB	Equity
FBC	Flagstar Bancorp Inc.	FBC	Equity
FBHS	Fortune Brands Home & Security Inc.	FBHS	Equity
FBP	First BanCorp	FBP	Equity
FC	Franklin Covey Co.	FC	Equity
FCAU	FIAT CHRYSLER AUTOMOBILES N.V.	FCAU	Equity
FCEL	FUELCELL ENERGY, INC.	FCEL	Equity
FCG	First Trust ISE-Revere Natural Gas ETF	FCG	ETF

Und Symbol	Company Name	Deriv Symbol	Inst Type
FCN	FTI CONSULTING, INC.	FCN	Equity
FCX	FREEMPORT-MCMORAN COPPER & GOLD INC.	FCX	Equity
FDN	First Trust Dow Jones Internet ETF	FDN	ETF
FDS	FACTSET RESEARCH SYSTEMS	FDS	Equity
FDX	FEDEX CORPORATION	FDX	Equity
FE	FIRSTENERGY CORP.	FE	Equity
FELP	Foresight Energy LP	FELP	Equity
FENG	PHOENIX NEW MEDIA LIMITED	FENG	Equity
FET	Forum Energy Technologies, Inc.	FET	Equity
FEYE	FIREEYE, INC.	FEYE	Equity
FEZ	SPDR EURO STOXX 50 ETF	FEZ	ETF
FFIV	F5 NETWORKS, INC.	FFIV	Equity
FGEN	FibroGen, Inc.	FGEN	Equity
FGP	Ferrellgas Partners, L.P.	FGP	Equity
FHN	FIRST HORIZON NATIONAL CORPORATION	FHN	Equity
FICO	FAIR ISAAC CORPORATION	FICO	Equity
FII	FEDERATED INVESTORS, INC.	FII	Equity
FIS	Fidelity National Information Services, Inc.	FIS	Equity
FISV	FISERV INC	FISV	Equity
FIT	Fitbit, Inc.	FIT	Equity
FITB	FIFTH THIRD BANCORP	FITB	Equity
FIVE	Five Below Inc	FIVE	Equity
FIVN	Five9, Inc.	FIVN	Equity
FIX	Comfort Systems USA Inc.	FIX	Equity
FIZZ	National Beverage Corp	FIZZ	Equity
FL	FOOT LOCKER, INC.	FL	Equity
FLDM	Fluidigm Corporation	FLDM	Equity
FLEX	FLEXTRONICS LTD	FLEX	Equity
FLIR	FLIR SYSTEMS INC.	FLIR	Equity
FLNT	Fluent, Inc.	FLNT	Equity
FLO	FLOWERS FOODS, INC.	FLO	Equity
FLOW	SPX FLOW, Inc.	FLOW	Equity
FLR	FLUOR CORPORATION	FLR	Equity
FLS	Flowserve Corp.	FLS	Equity
FLT	Fleetcor Technologies Inc.	FLT	Equity
FLWS	1-800-Flowers.com Inc.	FLWS	Equity
FLXN	Flexion Therapeutics, Inc.	FLXN	Equity
FLY	FLY LEASING LIMITED	FLY	Equity
FM	iShares MSCI Frontier 100 ETF	FM	ETF
FMC	FMC CORPORATION	FMC	Equity
FMX	Fomento Economico Mexicano, S.A.B. de C.V.	FMX	Equity
FN	Fabrinet	FN	Equity
FND	Floor & Decor Holdings, Inc.	FND	Equity
FNF	FIDELITY NATIONAL FINANCIAL	FNF	Equity
FNG	AdvisorShares New Tech and Media ETF	FNG	ETF
FNSR	FINISAR CORPORATION	FNSR	Equity
FNV	Franco-Nevada Corporation	FNV	Equity
FOE	Ferro Corp	FOE	Equity
FOLD	Amicus Therapeutics, Inc.	FOLD	Equity
FOMX	Foamix Pharmaceuticals Ltd.	FOMX	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
FOR	Forestar Group Inc.	FOR	Equity
FORM	FormFactor Inc.	FORM	Equity
FOSL	FOSSIL, INC.	FOSL	Equity
FOXA	(New) Fox Corporation Class A	FOXA	Equity
FPI	Farmland Partners Inc.	FPI	Equity
FPRX	Five Prime Therapeutics, Inc.	FPRX	Equity
FR	First Industrial Realty Trust	FR	Equity
FRAC	Keane Group, Inc.	FRAC	Equity
FRAN	Francesca's Holding Corp.	FRAN	Equity
FRC	First Republic Bank	FRC	Equity
FRED	Fred's, Inc.	FRED	Equity
FRGI	Fiesta Restaurant Group Inc	FRGI	Equity
FRO	FRONTLINE LIMITED	FRO	Equity
FRPT	Freshpet, Inc.	FRPT	Equity
FSCT	ForeScout Technologies, Inc.	FSCT	Equity
FSLR	FIRST SOLAR, INC.	FSLR	Equity
FSM	Fortuna Silver Mines Inc.	FSM	Equity
FSTR	LB Foster Co.	FSTR	Equity
FTAI	Fortress Transportation and Infrastructure Investors LLC	FTAI	Equity
FTD	FTD Companies, Inc.	FTD	Equity
FTI	FMC TECHNOLOGIES, INC.	FTI	Equity
FTK	Flotek Industries Inc	FTK	Equity
FTNT	FORTINET INC.	FTNT	Equity
FTR	FRONTIER COMMUNICATIONS CORPORATION	FTR	Equity
FTV	Fortive Corporation	FTV	Equity
FULT	Fulton Financial Corporation	FULT	Equity
FUN	CEDAR FAIR, L.P.	FUN	Equity
FWONA	Formula One Group	FWONA	Equity
FWONK	Liberty Media Corporation Series C Liberty Formula One	FWONK	Equity
FXA	CurrencyShares Australian Dollar Trust	FXA	ETF
FXB	CurrencyShares British Pound Sterling Trust	FXB	ETF
FXC	CurrencyShares Canadian Dollar Trust	FXC	ETF
FXE	CURRENCYSHARES EURO TRUST	FXE	ETF
FXF	CurrencyShares Swiss Franc ETF	FXF	ETF
FXH	First Trust Health Care AlphaDEX ETF	FXH	ETF
FXI	ISHARES FTSE CHINA 25 INDEX FUND	FXI	ETF
FXP	ProShares UltraShort FTSE China 50	FXP	ETF
FXY	CURRENCYSHARES JAPANESE YEN TRUST	FXY	ETF
G	GENPACT LIMITED	G	Equity
GALT	GALECTIN THERAPEUTICS, INC.	GALT	Equity
GASL	Direxion Daily Nat Gas Rltd Bull 3x ETF	GASL	ETF
GATX	GATX Corporation	GATX	Equity
GBT	Global Blood Therapeutics, Inc.	GBT	Equity
GBX	THE GREENBRIER COMPANIES, INC.	GBX	Equity
GCAP	GAIN Capital Holdings, Inc.	GCAP	Equity
GCI	Gannett Co., Inc.	GCI	Equity
GCO	Genesco Inc.	GCO	Equity
GD	GENERAL DYNAMICS CORPORATION	GD	Equity
GDDY	GoDaddy Inc.	GDDY	Equity
GDEN	Golden Entertainment, Inc.	GDEN	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
GDI	Gardner Denver Holdings, Inc.	GDI	Equity
GDOT	Green Dot Corporation	GDOT	Equity
GDS	GDS Holdings Limited	GDS	Equity
GDX	MARKET VECTORS GOLD MINERS ETF	GDX	ETF
GDXJ	VANECK VECTORS JUNIOR GOLD MINERS ETF	GDXJ	ETF
GE	GENERAL ELECTRIC COMPANY	GE	Equity
GEF	Greif, Inc.	GEF	Equity
GEL	Genesis Energy L.P.	GEL	Equity
GEN	Genesis Healthcare, Inc.	GEN	Equity
GEO	GEO Group Inc (The)	GEO	Equity
GEOS	GEOSPACE TECHNOLOGIES CORPORATION	GEOS	Equity
GERN	GERON CORPORATION	GERN	Equity
GES	GUESS? INC.	GES	Equity
GFF	Griffon Corporation	GFF	Equity
GFI	GOLD FIELDS LTD.	GFI	Equity
GGAL	GRUPO FINANCIERO GALICIA S.A.	GGAL	Equity
GGB	GERDAU S.A. (ADR)	GGB	Equity
GGG	GRACO, INC.	GGG	Equity
GHDX	Genomic Health, Inc.	GHDX	Equity
GHL	Greenhill & Co., Inc.	GHL	Equity
GIII	G-III Apparel Group Ltd	GIII	Equity
GIL	Gildan Activewear Inc	GIL	Equity
GILD	GILEAD SCIENCES INC.	GILD	Equity
GIS	GENERAL MILLS, INC.	GIS	Equity
GLAD	Gladstone Capital Corporation	GLAD	Equity
GLD	SPDR GOLD TRUST	GLD	ETF
GLDD	Great Lakes Dredge & Dock	GLDD	Equity
GLIBA	GCI Liberty, Inc.	GLIBA	Equity
GLL	ProShares UltraShort Gold	GLL	ETF
GLNG	Golar LNG Ltd	GLNG	Equity
GLOB	Globant S.A.	GLOB	Equity
GLOG	GASLOG LTD.	GLOG	Equity
GLOP	GasLog Partners LP	GLOP	Equity
GLP	Global Partners LP	GLP	Equity
GLPI	Gaming and Leisure Properties Inc	GLPI	Equity
GLRE	Greenlight Capital Re, Ltd.	GLRE	Equity
GLUU	Glu Mobile Inc	GLUU	Equity
GLW	CORNING INC.	GLW	Equity
GLYC	GlycoMimetics, Inc.	GLYC	Equity
GM	GENERAL MOTORS COMPANY	GM	Equity
GME	GAMESTOP CORPORATION	GME	Equity
GMED	GLOBUS MEDICAL, INC.	GMED	Equity
GMLP	Golar LNG Partners LP	GMLP	Equity
GNC	GNC HOLDINGS INC.	GNC	Equity
GNCA	Genocea Biosciences, Inc.	GNCA	Equity
GNE	Genie Energy Ltd.	GNE	Equity
GNMX	Aevi Genomic Medicine, Inc.	GNMX	Equity
GNRC	Generac Holdings Inc	GNRC	Equity
GNTX	GENTEX CORP.	GNTX	Equity
GNW	GENWORTH FINANCIAL INC.	GNW	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
GOGL	Golden Ocean Group Limited	GOGL	Equity
GOGO	GOGO, INC.	GOGO	Equity
GOLD	Barrick Gold Corporation	GOLD	Equity
GOOD	Gladstone Commercial Corporation	GOOD	Equity
GOOG	Alphabet Inc. Class C	GOOG	Equity
GOOGL	Alphabet Inc. Class A	GOOGL	Equity
GOOS	Canada Goose Holdings Inc.	GOOS	Equity
GORO	Gold Resource Corporation	GORO	Equity
GPC	GENUINE PARTS	GPC	Equity
GPI	GROUP 1 AUTOMOTIVE INC.	GPI	Equity
GPK	Graphic Packaging Holding Company	GPK	Equity
GPN	GLOBAL PAYMENTS INC.	GPN	Equity
GPOR	Gulfport Energy Corporation	GPOR	Equity
GPRE	Green Plains Renewable Energy, Inc.	GPRE	Equity
GPRO	GOPRO, INC.	GPRO	Equity
GPS	GAP INC.	GPS	Equity
GRA	W.R. GRACE & CO.	GRA	Equity
GREK	Global X MSCI Greece ETF	GREK	ETF
GRMN	GARMIN LTD.	GRMN	Equity
GROW	U.S. Global Investors, Inc.	GROW	Equity
GRPN	GROUPON, INC.	GRPN	Equity
GRUB	GRUBHUB INC.	GRUB	Equity
GS	THE GOLDMAN SACHS GROUP, INC.	GS	Equity
GSAT	Globalstar, Inc	GSAT	Equity
GSK	GLAXOSMITHKLINE PLC	GSK	Equity
GSKY	GreenSky, Inc.	GSKY	Equity
GSM	Globe Specialty Metals Inc	GSM	Equity
GSUM	Gridsum Holding Inc.	GSUM	Equity
GSVC	GSV Capital Corp	GSVC	Equity
GT	GOODYEAR TIRE & RUBBER COMPANY	GT	Equity
GTE	Gran Tierra Energy Inc.	GTE	Equity
GTES	Gates Industrial Corporation plc	GTES	Equity
GTLS	Chart Industries Inc	GTLS	Equity
GTN	Gray Television, Inc.	GTN	Equity
GTT	GTT Communications, Inc.	GTT	Equity
GTY	Getty Realty Corp.	GTY	Equity
GURE	Gulf Resources Inc.	GURE	Equity
GUSH	Direxion Dly S&P Oil&Gs Ex&Prd BI 3X ETF	GUSH	ETF
GV	Goldfield Corp.	GV	Equity
GVA	Granite Construction Incorporated	GVA	Equity
GWPH	GW PHARMACEUTICALS PLC	GWPH	Equity
GWR	Genesee & Wyoming Inc.	GWR	Equity
GWRE	Guidewire Software, Inc.	GWRE	Equity
GWW	GRAINGER, W.W. INC.	GWW	Equity
GXG	Global X MSCI Colombia ETF	GXG	ETF
H	Hyatt Hotels Corporation	H	Equity
HA	Hawaiian Holdings, Inc.	HA	Equity
HABT	Habit Restaurants, Inc.	HABT	Equity
HACK	PureFunds ISE Cyber Security ETF	HACK	ETF
HAIN	THE HAIN CELESTIAL GROUP, INC.	HAIN	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
HAL	HALLIBURTON COMPANY	HAL	Equity
HALO	Halozyne Therapeutics Inc.	HALO	Equity
HAO	Guggenheim China Small Cap ETF	HAO	ETF
HAS	HASBRO INC.	HAS	Equity
HBAN	HUNTINGTON BANCSHARES INCORPORATED	HBAN	Equity
HBI	Hanesbrands Inc.	HBI	Equity
HBM	HudBay Minerals, Inc.	HBM	Equity
HCA	HCA HOLDINGS, INC.	HCA	Equity
HCC	Warrior Met Coal, Inc.	HCC	Equity
HCI	HCI Group, Inc.	HCI	Equity
HCP	HCP, Inc.	HCP	Equity
HCR	Hi-Crush Inc.	HCLP	Equity
HD	THE HOME DEPOT, INC.	HD	Equity
HDB	HDFC BANK LTD	HDB	Equity
HDGE	AdvisorShares Ranger Equity Bear ETF	HDGE	ETF
HDS	HD SUPPLY HOLDINGS, INC.	HDS	Equity
HDSN	Hudson Technologies, Inc.	HDSN	Equity
HE	Hawaiian Electric Industries Inc.	HE	Equity
HEAR	Turtle Beach Corporation	HEAR	Equity
HEDJ	WisdomTree Europe Hedged Equity Fund	HEDJ	ETF
HEES	H&E Equipment Services, Inc.	HEES	Equity
HEP	Holly Energy Partners L.P.	HEP	Equity
HES	HESS CORPORATION	HES	Equity
HFC	HOLLYFRONTIER CORPORATION	HFC	Equity
HGV	Hilton Grand Vacations Inc.	HGV	Equity
HHC	The Howard Hughes Corporation	HHC	Equity
HI	Hillenbrand Inc	HI	Equity
HIBB	Hibbett Sports Inc	HIBB	Equity
HIG	THE HARTFORD FINANCIAL SERVICES GROUP, INC.	HIG	Equity
HII	Huntington Ingalls Industries, Inc.	HII	Equity
HIQ	Health Insurance Innovations, Inc.	HIQ	Equity
HIMX	Himax Technologies, Inc.	HIMX	Equity
HIVE	Aerohive Networks, Inc.	HIVE	Equity
HK	HALCON RESOURCES CORPORATION	HK	Equity
HL	HECLA MINING COMPANY	HL	Equity
HLF	HERBALIFE LTD.	HLF	Equity
HLIT	Harmonic Inc	HLIT	Equity
HLT	HILTON WORLDWIDE HOLDINGS INC.	HLT	Equity
HLTH	Nobilis Health Corp.	HLTH	Equity
HLX	HELIX ENERGY SOLUTIONS GROUP INC	HLX	Equity
HMC	HONDA MOTOR COMPANY LTD	HMC	Equity
HMHC	Houghton Mifflin Harcourt Co.	HMHC	Equity
HMSY	HMS Holdings Corp.	HMSY	Equity
HMY	HARMONY GOLD MINING COMPANY LIMITED	HMY	Equity
HOG	HARLEY-DAVIDSON, INC.	HOG	Equity
HOLI	Hollysys Automation Technologies Ltd.	HOLI	Equity
HOLX	HOLOGIC, INC.	HOLX	Equity
HOMB	Home Bancshares, Inc.	HOMB	Equity
HOME	At Home Group Inc.	HOME	Equity
HON	HONEYWELL INTERNATIONAL INC.	HON	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
HOS	HORNBECK OFFSHORE SERVICES INC	HOS	Equity
HP	HELMERICH & PAYNE INC	HP	Equity
HPE	Hewlett Packard Enterprise Company	HPE	Equity
HPJ	HIGHPOWER INTERNATIONAL, INC.	HPJ	Equity
HPQ	HP Inc.	HPQ	Equity
HPR	High Point Resources Corp.	HPR	Equity
HPT	HOSPITALITY PROPERTIES TRUST	HPT	Equity
HQY	HealthEquity, Inc.	HQY	Equity
HR	Healthcare Realty Trust Incorporated	HR	Equity
HRB	H&R BLOCK, INC.	HRB	Equity
HRC	Hill-Rom Holdings, Inc.	HRC	Equity
HRI	Herc Holdings Inc.	HRI	Equity
HRL	HORMEL FOODS CORPORATION	HRL	Equity
HRS	HARRIS CORPORATION	HRS	Equity
HRTG	Heritage Insurance Holdings, Inc.	HRTG	Equity
HRTX	Heron Therapeutics, Inc.	HRTX	Equity
HSBC	HSBC HOLDINGS PLC	HSBC	Equity
HSC	Harsco Corporation	HSC	Equity
HSIC	Henry Schein, Inc.	HSIC	Equity
HSII	Heidrick & Struggles International Inc.	HSII	Equity
HST	Host Hotels & Resorts	HST	Equity
HSY	HERSHEY CO THE	HSY	Equity
HT	Hersha Hospitality Trust	HT	Equity
HTA	Healthcare Trust of America Inc.	HTA	Equity
HTGC	Hercules Capital, Inc.	HTGC	Equity
HTH	Hilltop Holdings Inc.	HTH	Equity
HTHT	China Lodging Group, Limited	HTHT	Equity
HTZ	HERTZ GLOBAL HOLDINGS, INC	HTZ	Equity
HUBG	Hub Group, Inc.	HUBG	Equity
HUBS	HubSpot, Inc.	HUBS	Equity
HUM	HUMANA INC.	HUM	Equity
HUN	HUNTSMAN CORPORATION	HUN	Equity
HUYA	HUYA Inc.	HUYA	Equity
HWC	Hancock Whitney Corporation	HWC	Equity
HXL	HEXCEL CORPORATION	HXL	Equity
HYG	ISHARES IBOX \$ HIGH YIELD CORPORATE BOND	HYG	ETF
HYGS	Hydrogenics Corporation	HYGS	Equity
HYLD	AdvisorShares Peritus High Yield ETF	HYLD	ETF
HZNP	Horizon Pharma, Inc.	HZNP	Equity
HZO	MARINEMAX , INC.	HZO	Equity
I	INTELSAT S.A.	I	Equity
IAC	IAC/InterActiveCorp	IAC	Equity
IAG	IAMGOLD CORPORATION	IAG	Equity
IART	Integra LifeSciences Holdings Corporation	IART	Equity
IAT	iShares US Regional Banks	IAT	ETF
IAU	iShares Gold Trust	IAU	ETF
IBB	ISHARES NASDAQ BIOTECHNOLOGY	IBB	ETF
IBKC	IBERIABANK Corporation	IBKC	Equity
IBKR	Interactive Brokers Group Inc	IBKR	Equity
IBM	INTERNATIONAL BUSINESS MACHINES CORPORATION	IBM	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
IBN	ICICI BANK LIMITED	IBN	Equity
ICAD	iCAD Inc.	ICAD	Equity
ICE	Intercontinental Exchange Inc	ICE	Equity
ICHR	Ichor Holdings, Ltd.	ICHR	Equity
ICLR	ICON Public Limited Company	ICLR	Equity
ICPT	INTERCEPT PHARMACEUTICALS, INC.	ICPT	Equity
IDCC	INTERDIGITAL, INC.	IDCC	Equity
IDEX	Ideanomics, Inc.	IDEX	Equity
IDRA	IDERA PHARMACEUTICALS, INC.	IDRA	Equity
IDT	IDT Corporation	IDT	Equity
IDXX	IDEXX Laboratories, Inc.	IDXX	Equity
IEF	iShares 7 -10 Year Treasury Bond ETF	IEF	Equity
IEI	iShares 3-7 Year Treasury Bond ETF	IEI	ETF
IEMG	iShares Core MSCI Emerging Markets	IEMG	ETF
IEO	iShares U.S. Oil&Gas Explor&Prodtm	IEO	ETF
IEP	ICAHN ENTERPRISES, L.P.	IEP	Equity
IEV	iShares Europe	IEV	ETF
IEX	IDEX Corporation	IEX	Equity
IEZ	iShares U.S. Oil Equipment&Services	IEZ	ETF
IFF	International Flavors & Fragrances Inc.	IFF	Equity
IGN	iShares North American Tech-Multimd Ntwk	IGN	ETF
IGT	International Game Technology Plc	IGT	Equity
IGV	Tech-Software Sector ETF	IGV	ETF
IIVI	II-VI INCORPORATED	IIVI	Equity
IJH	iShares Core S&P Mid-Cap ETF	IJH	ETF
IJR	iShares Core S&P Small-Cap ETF	IJR	ETF
IJS	iShares S&P Small-Cap 600 Value	IJS	ETF
ILF	iShares Latin America 40	ILF	ETF
ILMN	ILLUMINA INC.	ILMN	Equity
IMAX	IMAX CORPORATION	IMAX	Equity
IMGN	IMMUNOGEN INC	IMGN	Equity
IMKTA	Ingles Markets, Incorporated	IMKTA	Equity
IMMR	IMMERSION CORP	IMMR	Equity
IMMU	IMMUNOMEDICS INC	IMMU	Equity
IMO	IMPERIAL OIL LTD.	IMO	Equity
INAP	Internap Corporation	INAP	Equity
INCY	INCYTE GENOMICS INC	INCY	Equity
INDA	iShares MSCI India	INDA	ETF
INDL	Direxion Daily India Bull 3x ETF	INDL	ETF
INFI	INFINITY PHARMACEUTICALS, INC.	INFI	Equity
INFN	Infinera Corporation	INFN	Equity
INFO	IHS Markit Ltd.	INFO	Equity
INFY	INFOSYS LTD.	INFY	Equity
ING	ING GROEP N.V.	ING	Equity
INGN	Inogen, Inc.	INGN	Equity
INGR	Ingredion Incorporated	INGR	Equity
INO	INOVIO PHARMACEUTICALS, INC.	INO	Equity
INOV	Inovalon Holdings, Inc.	INOV	Equity
INSG	Inseego Corporation	INSG	Equity
INSM	Insmad, Inc.	INSM	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
INSY	Insys Therapeutics Inc	INSY	Equity
INT	World Fuel Services Corporation	INT	Equity
INTC	INTEL CORPORATION	INTC	Equity
INTU	INTUIT CORP	INTU	Equity
INVA	Innoviva, Inc.	INVA	Equity
INVE	Identiv Inc.	INVE	Equity
INWK	InnerWorkings, Inc.	INWK	Equity
INXN	InterXion Holding NV	INXN	Equity
IO	ION Geophysical Corporation	IO	Equity
IONS	Ionis Pharmaceuticals, Inc.	IONS	Equity
IOVA	Iovance Biotherapeutics, Inc.	IOVA	Equity
IP	INTERNATIONAL PAPER COMPANY	IP	Equity
IPG	THE INTERPUBLIC GROUP OF COMPANIES, INC.	IPG	Equity
IPGP	IPG Photonics Corp	IPGP	Equity
IPHI	Inphi Corporation	IPHI	Equity
IPI	Intrepid Potash, Inc.	IPI	Equity
IQ	iQIYI, Inc.	IQ	Equity
IQV	IQVIA Holdings Inc.	IQV	Equity
IR	INGERSOLL-RAND PLC	IR	Equity
IRBT	iRobot Corporation	IRBT	Equity
IRDM	Iridium Communications Inc.	IRDM	Equity
IRET	Investors Real Estate Trust	IRET	Equity
IRM	IRON MOUNTAIN INC. (elec div)	IRM	Equity
IRT	Independence Realty Trust, Inc.	IRT	Equity
IRWD	Ironwood Pharmaceuticals Inc	IRWD	Equity
ISBC	Investors Bancorp, Inc	ISBC	Equity
ISEE	IVERIC bio, Inc.	ISEE	Equity
ISRG	INTUITIVE SURGICAL, INC.	ISRG	Equity
IT	Gartner, Inc.	IT	Equity
ITA	iShares US Aerospace and Defense ETF	ITA	ETF
ITB	ISHARES U.S. HOME CONSTRUCTION ETF	ITB	ETF
ITCI	Intra-Cellular Therapies, Inc.	ITCI	Equity
ITGR	Integer Holdings Corporation	ITGR	Equity
ITRI	ITRON, INC.	ITRI	Equity
ITT	ITT Inc.	ITT	Equity
ITUB	ITAU UNIBANCO HOLDING S.A.	ITUB	Equity
ITW	ILLINOIS TOOL WORKS INC.	ITW	Equity
IVAC	Intevac Inc.	IVAC	Equity
IVR	INVESCO MORTGAGE CAPITAL INCCOM	IVR	Equity
IVV	iShares Core S&P 500 ETF	IVV	ETF
IVW	iShares S&P 500 Growth ETF	IVW	ETF
IVZ	Invesco Ltd	IVZ	Equity
IWB	iShares Russell 1000	IWB	ETF
IWC	iSHARES RUSSELL MICROCAP INDEX	IWC	ETF
IWD	ISHARES RUSSELL 1000 VALUE ETF	IWD	ETF
IWF	iShares Russell 1000 Growth ETF	IWF	ETF
IWM	ISHARES RUSSELL 2000 INDEX	IWM	ETF
IWN	ISHRS RUSSELL 2000 VALUE ETF	IWN	ETF
IWO	ISHRS RUSSELL 2000 GROWTH INDX	IWO	ETF
IWP	iShares Russell Midcap Growth Index Fund ETF	IWP	ETF

Und Symbol	Company Name	Deriv Symbol	Inst Type
IWR	ISHARES RUSSELL MIDCAP INDEX FUND	IWR	ETF
IWS	ISHARES RUSSELL MIDCAP VALUE INDEX FUND	IWS	ETF
IYE	ISHARES DJ US ENERGY SECTOR ETF	IYE	ETF
IYM	ISHARES DOW JONES U.S. BASIC MATERIALS SECT	IYM	ETF
IYR	ISHARES DOW JONES US REAL ESTATE	IYR	ETF
IYT	ISHARES DOW JONES TRANSPORTATION AVERAGE	IYT	ETF
IYW	iShares US Technology	IYW	ETF
IYZ	iShares US Telecommunications	IYZ	ETF
JACK	JACK IN THE BOX, INC	JACK	Equity
JAG	Jagged Peak Energy Inc.	JAG	Equity
JAKK	JAKKS PACIFIC, INC.	JAKK	Equity
JAZZ	Jazz Pharmaceuticals Plc	JAZZ	Equity
JBHT	JB HUNT TRANSPORT SERVICES INC.	JBHT	Equity
JBL	JABIL CIRCUIT INC.	JBL	Equity
JBLU	JETBLUE AIRWAYS CORPORATI	JBLU	Equity
JBT	John Bean Technologies Corporation	JBT	Equity
JCI	Johnson Controls International plc	JCI	Equity
JCOM	j2 Global, Inc.	JCOM	Equity
JCP	J. C. PENNEY COMPANY, INC.	JCP	Equity
JD	JD.COM, INC.	JD	Equity
JDST	DIREXION DAILY JR GLD MNRS BEAR 3X ETF	JDST	ETF
JE	Just Energy Group Inc.	JE	Equity
JEC	JACOBS ENGINEERING GROUP, INC.	JEC	Equity
JEF	Jefferies Financial Group Inc.	JEF	Equity
JILL	J.Jill, Inc.	JILL	Equity
JKHY	Jack Henry & Associates Inc.	JKHY	Equity
JKS	Jinkosolar Holding Company Limited	JKS	Equity
JLL	Jones Lang LaSalle Incorporated	JLL	Equity
JMEI	JUMEI INTERNATIONAL HOLDING LIMITED	JMEI	Equity
JNCE	Jounce Therapeutics, Inc.	JNCE	Equity
JNJ	JOHNSON & JOHNSON	JNJ	Equity
JNK	SPDR BARCLAYS HIGH YIELD BOND	JNK	ETF
JNPR	JUNIPER NETWORKS, INC.	JNPR	Equity
JNUG	DIREXION DAILY JR GLD MNRS BULL 3X ETF	JNUG	ETF
JO	iPath Series B Bloomberg Coffee Subindex Total Return ETN	JO	ETF
JOE	ST. JOE CORPORATION	JOE	Equity
JPM	JPMORGAN CHASE & COMPANY	JPM	Equity
JRJC	CHINA FINANCE ONLINE CO., LTD.	JRJC	Equity
JWN	NORDSTROM INC.	JWN	Equity
K	KELLOGG COMPANY	K	Equity
KALU	Kaiser Aluminum Corporation	KALU	Equity
KAR	KAR AUCTION SERVICES, INC.	KAR	Equity
KBE	SPDR S&P BANK ETF	KBE	ETF
KBH	KB HOME	KBH	Equity
KBR	KBR, Inc.	KBR	Equity
KBWB	PowerShares KBW Bank ETF	KBWB	ETF
KDP	Keurig Dr. Pepper Inc.	KDP	Equity
KEM	Kemet Corporation	KEM	Equity
KEP	KOREA ELECTRIC POWER CORP.	KEP	Equity
KEX	KIRBY CORPORATION	KEX	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
KEY	KEYCORP	KEY	Equity
KEYS	Keysight Technologies Inc.	KEYS	Equity
KFY	KORN/FERRY INTERNATIONAL	KFY	Equity
KGC	KINROSS GOLD CORPORATION	KGC	Equity
KHC	The Kraft Heinz Company	KHC	Equity
KIE	SPDR S&P Insurance ETF	KIE	ETF
KIM	KIMCO REALTY CORP.	KIM	Equity
KIN	Kindred Biosciences, Inc.	KIN	Equity
KIRK	Kirkland's Inc.	KIRK	Equity
KKR	KKR & Co. LP	KKR	Equity
KL	Kirkland Lake Gold Ltd.	KL	Equity
KLAC	KLA-TENCOR CORPORATION	KLAC	Equity
KLIC	KULICKE AND SOFFA IND INC	KLIC	Equity
KMB	KIMBERLY-CLARK CORPORATION	KMB	Equity
KMI	KINDER MORGAN, INC.	KMI	Equity
KMT	Kennametal Inc.	KMT	Equity
KMX	CARMAX INC.	KMX	Equity
KN	KNOWLES CORPORATION	KN	Equity
KNDI	Kandi Technologies Corporation	KNDI	Equity
KNOP	KNOT Offshore Partners LP	KNOP	Equity
KNX	Knight-Swift Transportation Holdings Inc.	KNX	Equity
KO	THE COCA-COLA COMPANY	KO	Equity
KODK	Eastman Kodak Company	KODK	Equity
KOL	Market Vectors Coal ETF	KOL	ETF
KOLD	ProShares UltraShort Bloomberg Natrl Gas	KOLD	ETF
KOPN	Kopin Corporation	KOPN	Equity
KOS	Kosmos Energy Ltd	KOS	Equity
KPTI	KARYOPHARM THERAPEUTICS, INC.	KPTI	Equity
KR	THE KROGER COMPANY	KR	Equity
KRA	Kraton Performance Polymers Inc.	KRA	Equity
KRC	Kilroy Realty Corp.	KRC	Equity
KRE	SPDR S&P REGIONAL BANKING ETF	KRE	ETF
KRNT	Kornit Digital Ltd.	KRNT	Equity
KRNY	Kearny Financial Corp.	KRNY	Equity
KRO	Kronos Worldwide, Inc.	KRO	Equity
KSS	KOHL'S CORPORATION	KSS	Equity
KSU	KANSAS CITY SOUTHERN	KSU	Equity
KTOS	Kratos Defense & Security Solutions, Inc.	KTOS	Equity
KW	Kennedy-Wilson Holdings Inc.	KW	Equity
KWEB	KraneShares CSI China Internet ETF	KWEB	ETF
KYN	Kayne Anderson MLP Investment Company	KYN	Equity
L	LOEWS CORPORATION	L	Equity
LABD	Direxion Daily S&P Biotech Bear 3X ETF	LABD	ETF
LABU	Direxion Daily S&P Biotech Bull 3X ETF	LABU	ETF
LAD	Lithia Motors Inc	LAD	Equity
LADR	Ladder Capital Corp	LADR	Equity
LAMR	LAMAR ADVERTISING COMPANY	LAMR	Equity
LAZ	LAZARD LTD.	LAZ	Equity
LB	L BRANDS, INC.	LB	Equity
LBRDK	Liberty Broadband Corporation	LBRDK	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
LBTYA	LIBERTY GLOBAL INC	LBTYA	Equity
LBTYK	LIBERTY GLOBAL PLC	LBTYK	Equity
LC	LendingClub Corporation	LC	Equity
LCI	LANNETT COMPANY, INC.	LCI	Equity
LCII	LCI Industries (LCII)	LCII	Equity
LDL	Lydall, Inc	LDL	Equity
LDOS	LUMOS NETWORKS CORPORATION	LDOS	Equity
LE	LANDS' END, INC.	LE	Equity
LEA	Lear Corporation	LEA	Equity
LEAF	Leaf Group Ltd.	LEAF	Equity
LECO	Lincoln Electric Holdings, Inc.	LECO	Equity
LEE	Lee Enterprises, Incorporated	LEE	Equity
LEG	LEGGETT & PLATT, INC.	LEG	Equity
LEJU	Leju Holdings Limited	LEJU	Equity
LEN	LENNAR CORPORATION	LEN	Equity
LEVI	Levi Strauss & Co.	LEVI	Equity
LFC	CHINA LIFE INSURANCE CO., LTD.	LFC	Equity
LGCY	Legacy Reserves LP	LGCY	Equity
LGIH	LGI Homes, Inc.	LGIH	Equity
LGND	Ligand Pharmaceuticals Inc.	LGND	Equity
LH	LABORATORY CORP OF AMER HLDG	LH	Equity
LHCG	LHC Group, Inc.	LHCG	Equity
LII	LENNOX INTERNATIONAL, INC.	LII	Equity
LILA	LiLAC Group	LILA	Equity
LILAK	Liberty LiLAC Group	LILAK	Equity
LIN	Linde plc	LIN	Equity
LIT	Global X Lithium & Battery ETF	LIT	ETF
LITE	Lumentum Holdings Inc.	LITE	Equity
LIVN	LivaNova PLC	LIVN	Equity
LJPC	La Jolla Pharmaceutical Company	LJPC	Equity
LKQ	LKQ Corporation	LKQ	Equity
LL	Lumber Liquidators Holdings Inc	LL	Equity
LLL	L-3 COMMUNICATIONS (dist)	LLL	Equity
LLNW	Limelight Networks, Inc.	LLNW	Equity
LLY	ELI LILLY AND COMPANY	LLY	Equity
LM	LEGG MASON INC.	LM	Equity
LMNX	Luminex Corporation	LMNX	Equity
LMT	LOCKHEED MARTIN CORPORATION	LMT	Equity
LN	LINE Corporation	LN	Equity
LNC	LINCOLN NATIONAL CORPORATION	LNC	Equity
LNDC	Landec Corporation	LNDC	Equity
LNG	CHENIERE ENERGY, INC.	LNG	Equity
LNN	Lindsay Corporation	LNN	Equity
LNT	Alliant Energy Corporation	LNT	Equity
LOCO	EL POLLO LOCO HOLDINGS, INC.	LOCO	Equity
LOGI	Logitech International S.A.	LOGI	Equity
LOGM	LogMein, Inc.	LOGM	Equity
LOPE	Grand Canyon Education, Inc.	LOPE	Equity
LORL	Loral Space & Communications, Inc.	LORL	Equity
LOW	LOWE'S COMPANIES INC.	LOW	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
LPCN	Lipocine Inc.	LPCN	Equity
LPI	Laredo Petroleum Holdings, Inc.	LPI	Equity
LPL	LG Display Co., Ltd.	LPL	Equity
LPLA	LPL Financial Holdings Inc.	LPLA	Equity
LPSN	LivePerson, Inc.	LPSN	Equity
LPX	LOUISIANA-PACIFIC CORPORATION	LPX	Equity
LQD	iShares iBoxx \$ Invst Grade Crp Bond	LQD	ETF
LQDT	LIQUIDITY SERVICES, INC.	LQDT	Equity
LRCX	LAM RESEARCH CORPORATION	LRCX	Equity
LRN	K12, Inc.	LRN	Equity
LSCC	Lattice Semiconductor Corporation	LSCC	Equity
LSI	Life Storage, Inc.	LSI	Equity
LSTR	LANDSTAR SYSTEM INC	LSTR	Equity
LSXMA	The Liberty SiriusXM Group	LSXMA	Equity
LTC	LTC Properties Inc.	LTC	Equity
LTRPA	Liberty TripAdvisor Holdings, Inc.	LTRPA	Equity
LULU	LULULEMON ATHLETICA INC.	LULU	Equity
LUV	SOUTHWEST AIRLINES COMPANY	LUV	Equity
LVS	LAS VEGAS SANDS CORPORATION	LVS	Equity
LW	Lamb Weston Holdings, Inc.	LW	Equity
LX	LexinFintech Holdings Ltd.	LX	Equity
LXP	Lexington Realty Trust	LXP	Equity
LXX	Lexicon Pharmaceuticals, Inc.	LXX	Equity
LXU	LSB Industries Inc.	LXU	Equity
LYB	LYONDELLBASELL INDUSTRIES NV	LYB	Equity
LYFT	Lyft, Inc.	LYFT	Equity
LYG	Lloyds Banking Group Plc ADR	LYG	Equity
LYV	Live Nation Entertainment Inc	LYV	Equity
LZB	LA-Z-BOY INC.	LZB	Equity
M	MACY'S, INC.	M	Equity
MA	MASTERCARD INCORPORATED	MA	Equity
MAA	Mid-America Apartment Communities Inc.	MAA	Equity
MAC	THE MACERICH COMPANY	MAC	Equity
MACK	Merrimack Pharmaceuticals Inc	MACK	Equity
MAG	MAG Silver Corp.	MAG	Equity
MAIN	Main Street Capital Corporation	MAIN	Equity
MAN	MANPOWERGROUP INC.	MAN	Equity
MANH	MANHATTAN ASSOCIATES INC.	MANH	Equity
MANT	ManTech International Corporation	MANT	Equity
MANU	Manchester United plc	MANU	Equity
MAR	MARRIOTT INTERNATIONAL, INC.	MAR	Equity
MARK	Remark Holdings, Inc.	MARK	Equity
MAS	MASCO CORP.	MAS	Equity
MASI	Masimo Corporation	MASI	Equity
MAT	MATTEL, INC.	MAT	Equity
MATX	Matson, Inc.	MATX	Equity
MBB	iShares Barclays MBS Bond Fund ETF	MBB	ETF
MBI	MBIA INC.	MBI	Equity
MBT	MOBILE TELE SYSTEMS OJSC	MBT	Equity
MBUU	Malibu Boats, Inc.	MBUU	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
MCD	MCDONALD'S CORPORATION	MCD	Equity
MCF	Contango Oil & Gas Co	MCF	Equity
MCHI	iShares MSCI China ETF	MCHI	ETF
MCHP	MICROCHIP TECHNOLOGY INC	MCHP	Equity
MCK	MCKESSON CORPORATION	MCK	Equity
MCO	MOODY'S CORPORATION	MCO	Equity
MCRB	Seres Therapeutics, Inc.	MCRB	Equity
MCRI	MONRACH CASINO & RESORT, INC	MCRI	Equity
MD	Mednax Inc	MD	Equity
MDB	MongoDB, Inc.	MDB	Equity
MDC	M.D.C. HOLDINGS INC.	MDC	Equity
MDCA	MDC Partners Inc.	MDCA	Equity
MDCO	THE MEDICINES COMPANY	MDCO	Equity
MDLZ	MONDELEZ INTERNATIONAL, INC.	MDLZ	Equity
MDP	Meredith Corporation	MDP	Equity
MDR	McDermott International, Inc.	MDR	Equity
MDRX	Allscripts Healthcare Solutions, Inc.	MDRX	Equity
MDSO	MEDIDATA SOLUTIONS, INC.	MDSO	Equity
MDT	MEDTRONIC, INC.	MDT	Equity
MDY	SPDR S&P MIDCAP 400	MDY	ETF
MED	Medifast, Inc.	MED	Equity
MEET	MEETME, INC.	MEET	Equity
MEI	METHODE ELECTRONICS, INC.	MEI	Equity
MEIP	MEI PHARMA, INC.	MEIP	Equity
MELI	Mercadolibre Inc	MELI	Equity
MEOH	Methanex Corp.	MEOH	Equity
MERC	Mercer International Inc.	MERC	Equity
MET	METLIFE, INC.	MET	Equity
MFC	MANULIFE FINANCIAL CORPORATION	MFC	Equity
MFGP	Micro Focus International plc	MFGP	Equity
MFIN	Medallion Financial Corporation	MFIN	Equity
MGA	Magna International Inc.	MGA	Equity
MGI	MoneyGram International Inc	MGI	Equity
MGM	MGM RESORTS INTERNATIONAL	MGM	Equity
MGPI	MGP Ingredients Inc.	MGPI	Equity
MHK	MOHAWK INDUSTRIES, INC.	MHK	Equity
MHLD	MAIDEN HOLDINGS LTDSHS	MHLD	Equity
MIC	Macquarie Infrastructure Company Trust	MIC	Equity
MIDD	The Middleby Corporation	MIDD	Equity
MIDZ	Direxion Daily Mid Cap Bear 3X ETF	MIDZ	ETF
MIK	THE MICHAELS COMPANIES, INC.	MIK	Equity
MIND	Mitcham Industries, Inc.	MIND	Equity
MINI	MOBILE MINI, INC.	MINI	Equity
MITK	Mitek Systems, Inc.	MITK	Equity
MITT	AG Mortgage Investment Trust, Inc.	MITT	Equity
MJ	ETFMG Alternative Harvest ETF	MJ	ETF
MKC	MCCORMICK AND COMPANY, INC.	MKC	Equity
MKSI	MKS Instruments, Inc.	MKSI	Equity
MKTX	MarketAxess Holdings Inc.	MKTX	Equity
MLCO	Melco Resorts & Entertainment Limited	MLCO	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
MLHR	Herman Miller Inc.	MLHR	Equity
MLM	MARTIN MARIETTA MATERIALS INC	MLM	Equity
MLNT	Melinta Therapeutics, Inc.	MLNT	Equity
MMC	MARSH & MCLENNAN INC	MMC	Equity
MMLP	MARTIN MIDSTREAM PARTNERS LP	MMLP	Equity
MMM	3M COMPANY	MMM	Equity
MMP	MAGELLAN MIDSTREAM PARTNERS L.P	MMP	Equity
MMYT	MakeMyTrip Ltd	MMYT	Equity
MNK	MALLINCKRODT PLC	MNK	Equity
MNKD	MANKIND CORPORATION	MNKD	Equity
MNRO	Monro, Inc.	MNRO	Equity
MNST	MONSTER BEVERAGE CORPORATION	MNST	Equity
MNTA	MOMEMTA PHARMACEUTICALS, INC	MNTA	Equity
MNTX	Manitex International Inc	MNTX	Equity
MO	ALTRIA GROUP INC.	MO	Equity
MOBL	MobileIron, Inc.	MOBL	Equity
MODN	MODEL N, INC.	MODN	Equity
MOH	Molina Healthcare Inc.	MOH	Equity
MOMO	Momo Inc.	MOMO	Equity
MOO	Market Vectors Agribusiness ETF	MOO	ETF
MOS	THE MOSAIC COMPANY	MOS	Equity
MOV	Movado Group, Inc.	MOV	Equity
MPAA	Motorcar Parts of America, Inc.	MPAA	Equity
MPC	MARATHON PETROLEUM CORPORATION	MPC	Equity
MPLX	MPLX LP	MPLX	Equity
MPW	Medical Properties Trust Inc	MPW	Equity
MPWR	Monolithic Power Systems Inc	MPWR	Equity
MRC	MRC Global Inc.	MRC	Equity
MRCY	Mercury Systems, Inc.	MRCY	Equity
MRK	MERCK & COMPANY INC.	MRK	Equity
MRNS	Marinus Pharmaceuticals, Inc.	MRNS	Equity
MRO	MARATHON OIL CORPORATION	MRO	Equity
MRTX	Mirati Therapeutics, Inc.	MRTX	Equity
MRVL	MARVELL TECHNOLOGY GROUP LTD.	MRVL	Equity
MS	MORGAN STANLEY	MS	Equity
MSB	Mesabi Trust	MSB	Equity
MSCI	MSCI Inc	MSCI	Equity
MSFT	MICROSOFT CORPORATION	MSFT	Equity
MSG	The Madison Square Garden Company	MSG	Equity
MSGN	MSG Networks, Inc.	MSGN	Equity
MSI	MOTOROLA INC (reverse split)	MSI	Equity
MSM	MSC Industrial Direct Co. Inc.	MSM	Equity
MSTR	MICROSTRATEGY, INC	MSTR	Equity
MT	ARCELORMITTAL	MT	Equity
MTB	M & T BANK CORP	MTB	Equity
MTCH	Match Group, Inc.	MTCH	Equity
MTDR	Matador Resources Company	MTDR	Equity
MTG	MGIC INVESTMENT CORPORATION	MTG	Equity
MTH	MERITAGE HOMES CORPORATION	MTH	Equity
MTN	Vail Resorts, Inc.	MTN	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
MTOR	Meritor, Inc.	MTOR	Equity
MTRX	Matrix Service Company	MTRX	Equity
MTSI	MACOM Technology Solutions Holdings, Inc.	MTSI	Equity
MTW	THE MANITOWOC COMPANY, INC.	MTW	Equity
MTZ	MASTEC INC	MTZ	Equity
MU	MICRON TECHNOLOGY INC.	MU	Equity
MUB	iShares S&P National AMT Free Municipal Bond Fund	MUB	ETF
MUFG	Mitsubishi UFJ Financial Group, Inc.	MUFG	Equity
MUR	MURPHY OIL CORPORATION	MUR	Equity
MUSA	Murphy USA Inc.	MUSA	Equity
MUX	McEwen Mining Inc.	MUX	Equity
MVIS	Microvision, Inc.	MVIS	Equity
MVO	MV Oil Trust	MVO	Equity
MWA	Mueller Water Products, Inc.	MWA	Equity
MX	MagnaChip Semiconductor Corp.	MX	Equity
MXIM	MAXIM INTEGRATED PROD. IN	MXIM	Equity
MXL	Maxlinear, Inc.	MXL	Equity
MYGN	MYRIAD GENETICS INC	MYGN	Equity
MYL	MYLAN, INC.	MYL	Equity
NANO	Nanometrics Incorporated	NANO	Equity
NAT	Nordic American Tankers Ltd	NAT	Equity
NATI	National Instruments Corporation	NATI	Equity
NAV	NAVISTAR INTERNATIONAL CORPORATION	NAV	Equity
NAVI	NAVIENT CORPORATION	NAVI	Equity
NBEV	New Age Beverages Corporation	NBEV	Equity
NBIX	NEUROCRINE BIOSCIENCES	NBIX	Equity
NBL	NOBLE ENERGY INC	NBL	Equity
NBR	NABORS INDUSTRIES LTD.	NBR	Equity
NBRV	Nabriva Therapeutics plc	NBRV	Equity
NCI	Navigant Consulting Inc.	NCI	Equity
NCLH	NORWEGIAN CRUISE LINE HOLDINGS LTD.	NCLH	Equity
NCMI	National Cinedia Inc	NCMI	Equity
NCR	NCR CORP	NCR	Equity
NDAQ	Nasdaq OMX Group	NDAQ	Equity
NDLS	NOODLES & COMPANY	NDLS	Equity
NDSN	Nordson Corporation	NDSN	Equity
NE	NOBLE CORPORATION PLC	NE	Equity
NEE	NextEra Energy, Inc.	NEE	Equity
NEM	NEWMONT MINING CORPORATION	NEM	Equity
NEOS	Neos Therapeutics, Inc.	NEOS	Equity
NEP	NextEra Energy Partners, LP	NEP	Equity
NEPT	Neptune Technologies & Bioresources Inc	NEPT	Equity
NEWR	New Relic, Inc.	NEWR	Equity
NFG	National Fuel Gas Company	NFG	Equity
NFLX	NETFLIX, INC.	NFLX	Equity
NG	NOVAGOLD RESOURCES INC (dist)	NG	Equity
NGD	NEW GOLD, INC.	NGD	Equity
NGG	National Grid PLC	NGG	Equity
NGL	NGL ENERGY PARTNERS L.P.	NGL	Equity
NGVC	Natural Grocers by Vitamin Cottage, Inc.	NGVC	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
NHC	National HealthCare Corporation	NHC	Equity
NHI	National Health Investors Inc.	NHI	Equity
NHTC	NATURAL HEALTH TRENDS CORP.	NHTC	Equity
NI	NISOURCE, INC	NI	Equity
NIO	NIO Inc.	NIO	Equity
NK	NantKwest, Inc.	NK	Equity
NKE	NIKE INC.	NKE	Equity
NKTR	NEKTAR THERAPEUTICS	NKTR	Equity
NLNK	NewLink Genetics Corp.	NLNK	Equity
NLS	Nautilus Inc.	NLS	Equity
NLSN	Nielsen Holdings NV	NLSN	Equity
NLY	ANNALY CAPITAL MANAGEMENT, INC.	NLY	Equity
NM	Navios Maritime Holdings, Inc.	NM	Equity
NMFC	New Mountain Finance Corporation	NMFC	Equity
NMIH	NMI Holdings, Inc.	NMIH	Equity
NMM	Navios Maritime Partners LP	NMM	Equity
NNBR	NN, Inc.	NNBR	Equity
NNN	National Retail Properties, Inc.	NNN	Equity
NOAH	Noah Holdings, Ltd.	NOAH	Equity
NOC	NORTHROP GRUMMAN CORP	NOC	Equity
NOG	Northern Oil and Gas Inc	NOG	Equity
NOK	NOKIA CORPORATION	NOK	Equity
NOV	NATIONAL OILWELL VARCO, INC.	NOV	Equity
NOW	ServiceNow Inc.	NOW	Equity
NPO	EnPro Industries Inc	NPO	Equity
NPTN	NeoPhotonics Corp.	NPTN	Equity
NRE	NorthStar Realty Europe Corp.	NRE	Equity
NRG	NRG ENERGY, INC.	NRG	Equity
NRP	Natural Resource Partners L.P.	NRP	Equity
NRZ	NEW RESIDENTIAL INVESTMENT CORP.	NRZ	Equity
NS	NuStar Energy LP	NS	Equity
NSA	National Storage Affiliates	NSA	Equity
NSC	NORFOLK SOUTHERN CORPORATION	NSC	Equity
NSP	Insperty, Inc.	NSP	Equity
NSTG	NanoString Technologies, Inc.	NSTG	Equity
NTAP	NETAPP, INC.	NTAP	Equity
NTCT	NetScout Systems, Inc.	NTCT	Equity
NTES	NETEASE, INC.	NTES	Equity
NTGR	NETGEAR INC	NTGR	Equity
NTLA	Intellia Therapeutics Inc.	NTLA	Equity
NTNX	Nutanix, Inc.	NTNX	Equity
NTP	Nam Tai Property Inc.	NTP	Equity
NTR	Nutrien Ltd.	NTR	Equity
NTRP	Neurotrope, Inc.	NTRP	Equity
NTRS	NORTHERN TRUST CORPORATIO	NTRS	Equity
NTWK	NetSol Technologies, Inc.	NTWK	Equity
NUAN	NUANCE COMMUNICATIONS, INC.	NUAN	Equity
NUE	NUCOR CORPORATION	NUE	Equity
NUGT	DIREXION DAILY GOLD MINERS BULL 3X SHRS	NUGT	ETF
NUS	NU SKIN ENTERPRISES INC.	NUS	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
NUVA	NuVasive, Inc.	NUVA	Equity
NVAX	NOVAVAX, INC	NVAX	Equity
NVCR	NovoCure Limited	NVCR	Equity
NVDA	NVIDIA CORPORATION	NVDA	Equity
NVGS	NAVIGATOR HOLDINGS LTD.	NVGS	Equity
NVLN	Novelion Therapeutics Inc.	NVLN	Equity
NVMI	Nova Measuring Instruments Ltd.	NVMI	Equity
NVO	Novo Nordisk	NVO	Equity
NVRO	Nevro Corp.	NVRO	Equity
NVS	ALCON INC (Merger)	NVS	Equity
NVTA	Invitae Corporation	NVTA	Equity
NWL	NEWELL RUBBERMAID, INC.	NWL	Equity
NWPX	Northwest Pipe Company	NWPX	Equity
NWS	News Corporation	NWS	Equity
NWSA	NEWS CORPORATION	NWSA	Equity
NX	Quanex Building Products Corporation	NX	Equity
NXGN	NextGen Healthcare, Inc.	NXGN	Equity
NXPI	NXP Semiconductors NV	NXPI	Equity
NXST	NEXSTAR BROADCASTING GROUP, INC.	NXST	Equity
NYCB	NEW YORK COMM. BANCORP	NYCB	Equity
NYMT	New York Mortgage Trust, Inc.	NYMT	Equity
NYMX	Nymox Pharmaceutical Corporation	NYMX	Equity
NYT	NEW YORK TIMES COMPANY	NYT	Equity
O	Realty Income Corporation	O	Equity
OAK	Oaktree Capital Group LLC	OAK	Equity
OAS	Oasis Petroleum Inc.	OAS	Equity
OBE	Obsidian Energy Ltd.	OBE	Equity
OC	OWENS CORNING INC.	OC	Equity
OCN	OCWEN FINANCIAL CORPORATION	OCN	Equity
OCSL	Oaktree Specialty Lending Corporation	OCSL	Equity
OCUL	Ocular Therapeutix, Inc.	OCUL	Equity
ODFL	Old Dominion Freight Line (150 shares)	ODFL	Equity
ODP	OFFICE DEPOT, INC.	ODP	Equity
OEF	ISHARES S&P 100 ETF	OEF	ETF
OFG	OFG BANNCORP	OFG	Equity
OFIX	ORTHOFIX INTERNATIONAL N.V.	OFIX	Equity
OHI	OMEGA Healthcare Investors, Inc.	OHI	Equity
OI	OWENS-ILLINOIS INC.	OI	Equity
OIH	MARKET VECTORS OIL SERVICES ETF	OIH	ETF
OII	OCEANEERING INTERNATIONAL, INC	OII	Equity
OIS	Oil States International, Inc.	OIS	Equity
OKE	ONEOK, INC.	OKE	Equity
OKTA	Okta, Inc.	OKTA	Equity
OLED	CAMBRIDGE DISPLAY TECHNOLOGY INC.	OLED	Equity
OLLI	Ollie's Bargain Outlet Holdings, Inc.	OLLI	Equity
OLN	OLIN CORP.	OLN	Equity
OMC	OMNICOM GROUP	OMC	Equity
OMER	Omeros Corporation	OMER	Equity
OMEX	Odyssey Marine Exploration Inc.	OMEX	Equity
OMF	OneMain Holdings, Inc.	OMF	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
OMI	OWENS & MINOR, INC	OMI	Equity
OMN	OMNOVA Solutions Inc.	OMN	Equity
ON	ON Semiconductor Corporation	ON	Equity
ONDK	On Deck Capital, Inc.	ONDK	Equity
ONVO	ORGANOVO HOLDINGS, INC.	ONVO	Equity
OPB	Opus Bank	OPB	Equity
OPI	(New) Office Properties Income Trust	OPI	Equity
OPK	OPKO HEALTH, INC.	OPK	Equity
ORA	Ormat Technologies, Inc.	ORA	Equity
ORAN	Orange SA	ORAN	Equity
ORBC	ORBCOMM, Inc.	ORBC	Equity
ORC	Orchid Island Capital, Inc.	ORC	Equity
ORCL	ORACLE CORPORATION	ORCL	Equity
ORI	Old Republic International Corporation	ORI	Equity
ORLY	O'REILLY AUTOMOTIVE INC.	ORLY	Equity
ORMP	Oramed Pharmaceuticals Inc.	ORMP	Equity
OSIS	OSI Systems Inc.	OSIS	Equity
OSK	Oshkosh Corporation	OSK	Equity
OSPN	OneSpan Inc.	OSPN	Equity
OSTK	Overstock.com, Inc.	OSTK	Equity
OSUR	ORASURE TECHNOLOGIES INC	OSUR	Equity
OTEX	OPEN TEXT CORPORATION	OTEX	Equity
OTIC	Otonomy, Inc.	OTIC	Equity
OUT	OUTFRONT MEDIA INC.	OUT	Equity
OXM	Oxford Industries, Inc	OXM	Equity
OXY	OCCIDENTAL PETROLEUM CORPORATION	OXY	Equity
OZK	Bank OZK	OZK	Equity
OZM	Och-Ziff Capital Management Group	OZM	Equity
PAA	PLAINS ALL AMERICAN PIPELINE, LP	PAA	Equity
PAAS	PAN AMERICAN SILVER CORPORATION	PAAS	Equity
PACB	Pacific Biosciences of California Inc	PACB	Equity
PACW	PacWest Bancorp	PACW	Equity
PAG	Penske Automotive Group Inc	PAG	Equity
PAGP	PLAINS GP HOLDINGS, L.P.	PAGP	Equity
PAGS	PagSeguro Digital Ltd.	PAGS	Equity
PANW	Palo Alto Networks Inc	PANW	Equity
PAYC	Paycom Software, Inc.	PAYC	Equity
PAYX	PAYCHEX, INC	PAYX	Equity
PBA	Pembina Pipeline Corporation	PBA	Equity
PBCT	PEOPLES UNITED FINANCIAL BANK, INC.	PBCT	Equity
PBF	PBF ENERGY INC.	PBF	Equity
PBFX	PBF Logistics LP	PBFX	Equity
PBI	PITNEY BOWES INC.	PBI	Equity
PBPB	POTBELLY CORPORATION	PBPB	Equity
PBR	PETROLEO BRASILEIRO PETROBRAS SA	PBR	Equity
PBRA	Petroleo Brasileiro S.A. - Petrobras	PBRA	Equity
PBT	PERMIAN BASIN ROYALTY TRUST	PBT	Equity
PBYI	PUMA BIOTECHNOLOGY, INC.	PBYI	Equity
PCAR	PACCAR INC.	PCAR	Equity
PCG	PG & E CORP	PCG	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
PCH	PotlatchDeltic Corporation	PCH	Equity
PCOM	Points International Ltd.	PCOM	Equity
PCRX	Pacira Pharmaceuticals, Inc./DE	PCRX	Equity
PCYG	Park City Group Inc.	PCYG	Equity
PDCE	PDC Energy Inc.	PDCE	Equity
PDCO	Patterson Companies, Inc.	PDCO	Equity
PDD	Pinduoduo Inc.	PDD	Equity
PDLI	PDL BioPharma	PDLI	Equity
PDS	Precision Drilling Corporation	PDS	Equity
PE	PARSLEY ENERGY, INC.	PE	Equity
PEG	PUBLIC SERVICE ENT GROUP INC	PEG	Equity
PEGA	Pegasystems, Inc.	PEGA	Equity
PEGI	Pattern Energy Group Inc.	PEGI	Equity
PEI	Penn Real Estate Invest Tst	PEI	Equity
PEIX	PACIFIC ETHANOL, INC.	PEIX	Equity
PENN	PENN NATIONAL GAMING INC	PENN	Equity
PEP	PEPSICO, INC.	PEP	Equity
PER	SandRidge Permian Trust	PER	Equity
PERI	Perion Network Ltd.	PERI	Equity
PES	Pioneer Energy Services Corp.	PES	Equity
PETS	PETMED EXPRESS, INC.	PETS	Equity
PETX	Aratana Therapeutics, Inc.	PETX	Equity
PFE	PFIZER INC.	PFE	Equity
PFF	iShares US Preferred Stock	PFF	ETF
PFG	PRINCIPAL FINANCIAL GROUP, INC.	PFG	Equity
PFPT	Proofpoint, Inc.	PFPT	Equity
PFSI	PennyMac Financial Services, Inc.	PFSI	Equity
PFSW	PFSweb Inc.	PFSW	Equity
PG	PROCTER & GAMBLE COMPANY	PG	Equity
PGF	PowerShares Financial Preferred ETF	PGF	ETF
PGNX	PROGENICS PHARMACEUTICALS	PGNX	Equity
PGR	PROGRESSIVE CORPORATION	PGR	Equity
PGTI	PGT, Inc.	PGTI	Equity
PH	PARKER-HANNIFIN CORP	PH	Equity
PHG	Koninklijke Philips N.V	PHG	Equity
PHM	PULTEGROUP, INC.	PHM	Equity
PHX	PANHANDLE OIL AND GAS, INC.	PHX	Equity
PI	Impinj, Inc.	PI	Equity
PICO	PICO Holdings Inc.	PICO	Equity
PII	POLARIS INDUSTRIES, INC.	PII	Equity
PINS	Pinterest, Inc.	PINS	Equity
PIR	PIER 1 IMPORTS, INC.	PIR	Equity
PJC	Piper Jaffray Companies	PJC	Equity
PJT	PJT Partners Inc.	PJT	Equity
PKG	PACKAGING CORP OF AMERICA	PKG	Equity
PKI	PERKINELMER, INC.	PKI	Equity
PKX	POSCO	PKX	Equity
PLAB	Photronics Inc.	PLAB	Equity
PLAY	Dave & Buster's Entertainment, Inc.	PLAY	Equity
PLCE	CHILDREN'S PLACE RETAIL	PLCE	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
PLD	PROLOGIS INC.	PLD	Equity
PLNT	Planet Fitness, Inc.	PLNT	Equity
PLOW	Douglas Dynamics, Inc.	PLOW	Equity
PLUG	PLUG POWER INC	PLUG	Equity
PLX	Protalix BioTherapeutics Inc.	PLX	Equity
PM	PHILIP MORRIS INTERNATIONAL, INC.	PM	Equity
PMT	Pennymac Mortgage Investment Trust	PMT	Equity
PNC	PNC FINANCIAL SERVICES GROUP INC.	PNC	Equity
PNFP	Pinnacle Financial Partners, Inc.	PNFP	Equity
PNR	Pentair plc	PNR	Equity
PNW	Pinnacle West Capital Corporation	PNW	Equity
PODD	Insulet Corporation	PODD	Equity
POOL	Pool Corporation	POOL	Equity
POST	Post Holdings, Inc.	POST	Equity
POWI	Power Integrations Inc	POWI	Equity
PPC	PILGRIMS PRIDE CORP	PPC	Equity
PPG	PPG INDUSTRIES INC.	PPG	Equity
PPL	PPL CORPORATION	PPL	Equity
PRAA	PRA GROUP, INC.	PRAA	Equity
PRAH	PRA Health Sciences, Inc.	PRAH	Equity
PRFT	Perficient, Inc.	PRFT	Equity
PRGO	PERRIGO COMPANY	PRGO	Equity
PRGS	Progress Software Corporation	PRGS	Equity
PRI	Primerica, Inc.	PRI	Equity
PRIM	Primoris Services Corporation	PRIM	Equity
PRLB	Proto Labs Inc	PRLB	Equity
PRO	Pros Holdings Inc	PRO	Equity
PRSP	Perspecta Inc.	PRSP	Equity
PRTA	PROTHENA CORPORATION PLC	PRTA	Equity
PRTK	Paratek Pharmaceuticals, Inc.	PRTK	Equity
PRTY	Party City Holdco Inc.	PRTY	Equity
PRU	PRUDENTIAL FINANCIAL, INC.	PRU	Equity
PSA	Public Storage	PSA	Equity
PSEC	Prospect Captial Corporation	PSEC	Equity
PSMT	PriceSmart, Inc.	PSMT	Equity
PSO	Pearson plc	PSO	Equity
PSQ	ProShares Short QQQ	PSQ	ETF
PST	ProShares UltraShort 7-10 Year Treasury	PST	ETF
PSTG	Pure Storage, Inc.	PSTG	Equity
PSTI	Pluristem Therapeutics Inc	PSTI	Equity
PSX	PHILLIPS 66	PSX	Equity
PSXP	PHILLIPS 66 PARTNERS L.P.	PSXP	Equity
PTC	PTC Inc.	PTC	Equity
PTCT	PTC Therapeutics, Inc.	PTCT	Equity
PTE	PolarityTE, Inc.	PTE	Equity
PTEN	PATTERSON-UTI ENERGY INC.	PTEN	Equity
PTI	Proteostasis Therapeutics, Inc.	PTI	Equity
PTLA	Portola Pharmaceuticals, Inc.	PTLA	Equity
PTR	PETROCHINA CO. LTD.	PTR	Equity
PUMP	ProPetro Holding Corp.	PUMP	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
PVG	Pretium Resources, Inc.	PVG	Equity
PVH	PVH Corp.	PVH	Equity
PVL	Permianville Royalty Trust	PVL	Equity
PVTL	Pivotal Software, Inc.	PVTL	Equity
PWR	QUANTA SERVICES, INC.	PWR	Equity
PXD	PIONEER NATURAL RESOURCES COMPANY	PXD	Equity
PXLW	PIXELWORKS, INC.	PXLW	Equity
PYPL	PayPal Holdings, Inc.	PYPL	Equity
PYX	Pyxus International, Inc.	PYX	Equity
PZZA	Papa John's International, Inc.	PZZA	Equity
QCOM	QUALCOMM INCORPORATED	QCOM	Equity
QD	Qudian, Inc.	QD	Equity
QDEL	QUIDEL CORPORATION	QDEL	Equity
QEP	QEP Resources Inc.	QEP	Equity
QGEN	QIAGEN N V	QGEN	Equity
QID	PROSHARES ULTRASHORT QQQ	QID	ETF
QIWI	QIWI PLC	QIWI	Equity
QLD	PROSHARES ULTRA QQQ	QLD	ETF
QLYS	QUALYS, INC.	QLYS	Equity
QNST	Quinstreet, Inc.	QNST	Equity
QQQ	INVESCO QQQ Trust	QQQ	ETF
QRTEA	Qurate Retail, Inc.	QRTEA	Equity
QRVO	Qorvo, Inc.	QRVO	Equity
QSR	Restaurant Brands International Inc.	QSR	Equity
QTWO	Q2 Holdings, Inc.	QTWO	Equity
QUAD	Quad/Graphics, Inc.	QUAD	Equity
QUIK	QuickLogic Corporation	QUIK	Equity
QUOT	Quotient Technology Inc.	QUOT	Equity
QURE	uniQure N.V.	QURE	Equity
R	RYDER SYSTEMS INC.	R	Equity
RACE	Ferrari N.V.	RACE	Equity
RAD	RITE AID CORPORATION	RAD	Equity
RAIL	Freight Car America Inc	RAIL	Equity
RAMP	LiveRamp Holdings, Inc.	RAMP	Equity
RARE	Ultragenyx Pharmaceutical Inc.	RARE	Equity
RBA	Ritchie Bros. Auctioneers Incorporated	RBA	Equity
RBS	Royal Bank of Scotland Group PLC	RBS	Equity
RCI	Rogers Communication, Inc.	RCI	Equity
RCII	RENT-A_CENTER, INC.	RCII	Equity
RCL	ROYAL CARIBBEAN CRUISES LTD.	RCL	Equity
RDFN	Redfin Corporation	RDFN	Equity
RDI	Reading International Inc	RDI	Equity
RDN	RADIAN GROUP INC.	RDN	Equity
RDNT	RadNet, Inc.	RDNT	Equity
RDSA	ROYAL DUTCH SHELL PLC	RDSA	Equity
RDSB	ROYAL DUTCH SHELL PLC CL B	RDSB	Equity
RDUS	Radius Health, Inc.	RDUS	Equity
RDWR	RADWARE LTD.	RDWR	Equity
RDY	Dr. Reddy's Laboratories Limited	RDY	Equity
RE	EVEREST RE GROUP LTD	RE	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
RECN	Resources Connection, Inc.	RECN	Equity
REFR	Research Frontiers Inc.	REFR	Equity
REG	REGENCY CENTERS CORP	REG	Equity
REGI	Renewable Energy Group Inc	REGI	Equity
REGN	REGENERON PHARMACEUTICALS	REGN	Equity
REI	Ring Energy, Inc.	REI	Equity
REM	ISHARES MORTGAGE REAL ESTATE ETF	REM	ETF
REMX	Market Vectors Rare Earth/Strategic Metals ETF	REMX	ETF
RENN	Renren, Inc.	RENN	Equity
RES	RPC INC	RES	Equity
RESI	Front Yard Residential Corporation	RESI	Equity
RESN	Resonant Inc.	RESN	Equity
REV	Revlon, Inc.	REV	Equity
RF	REGIONS FINANCIAL CORPORATION	RF	Equity
RFP	Resolute Forest Products Inc.	RFP	Equity
RGEN	Repligen Corporation	RGEN	Equity
RGLD	ROYAL GOLD, INC.	RGLD	Equity
RGLS	REGULUS THERAPEUTICS INC.	RGLS	Equity
RGNX	REGENXBIO Inc.	RGNX	Equity
RGR	STURM, RUGER & COMPANY INC.	RGR	Equity
RH	RESTORATION HARDWARE HOLDINGS, INC	RH	Equity
RHI	ROBERT HALF INTERNATIONAL	RHI	Equity
RHP	Ryman Hospitality Properties, Inc.(Stk Div)	RHP	Equity
RICK	RCI HOSPITALITY HOLDINGS, INC.	RICK	Equity
RIG	TRANSOCEAN LTD.	RIG	Equity
RIGL	Rigel Pharmaceuticals, Inc.	RIGL	Equity
RIO	RIO TINTO PLC	RIO	Equity
RIOT	Riot Blockchain, Inc.	RIOT	Equity
RJF	RAYMOND JAMES FINANCIAL INC	RJF	Equity
RL	RALPH LAUREN CORPORATION	RL	Equity
RLGY	Realogy Holdings Corp.	RLGY	Equity
RLJ	RLJ Lodging Trust	RLJ	Equity
RM	REGIONAL MANAGEMENT CORP.	RM	Equity
RMBS	RAMBUS INC	RMBS	Equity
RMD	RESMED, INC.	RMD	Equity
RMTI	Rockwell Medical, Inc.	RMTI	Equity
RNG	RINGCENTRAL, INC.	RNG	Equity
RNR	RENAISSANCERE HOLDINGS LTD.	RNR	Equity
RNWK	RealNetworks, Inc.	RNWK	Equity
ROG	ROGERS CORPORATION	ROG	Equity
ROIC	Retail Opportunity Investments Corp.	ROIC	Equity
ROK	ROCKWELL AUTOMATION	ROK	Equity
ROKU	Roku, Inc.	ROKU	Equity
ROL	Rollins, Inc.	ROL	Equity
ROM	ProShares Ultra Technology	ROM	ETF
ROP	Roper Technologies, Inc.	ROP	Equity
ROST	ROSS STORES INC.	ROST	Equity
ROYT	Pacific Coast Oil Trust	ROYT	Equity
RP	RealPage, Inc.	RP	Equity
RPD	Rapid7, Inc.	RPD	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
RPM	RPM INTERNATIONAL, INC	RPM	Equity
RRC	RANGE RESOURCES CORPORATION	RRC	Equity
RRD	R.R. DONNELLEY & SONS COMPANY	RRD	Equity
RRGB	Red Robin Gourmet Burgers, Inc.	RRGB	Equity
RRR	Red Rock Resorts, Inc.	RRR	Equity
RS	RELIANCE STEEL & ALUMINUM CO.	RS	Equity
RSG	REPUBLIC SERVICES	RSG	Equity
RSP	Invesco S&P 500 Equal Weight ETF	RSP	ETF
RST	Rosetta Stone Inc	RST	Equity
RSX	MARKET VECTORS RUSSIA ETF	RSX	ETF
RTEC	Rudolph Technologies Inc.	RTEC	Equity
RTH	Market Vectors Retail ETF	RTH	ETF
RTN	RAYTHEON COMPANY	RTN	Equity
RTRX	Retrophin, Inc.	RTRX	Equity
RUBI	THE RUBICON PROJECT, INC.	RUBI	Equity
RUN	Sunrun Inc.	RUN	Equity
RUSHA	Rush Enterprises Inc	RUSHA	Equity
RUSL	Direxion Daily Russia Bull 3x Shares	RUSL	ETF
RUSS	Direxion Daily Russia Bear 3x ETF	RUSS	ETF
RUTH	Ruth's Hospitality Group Inc.	RUTH	Equity
RVNC	Revance Therapeutics, Inc.	RVNC	Equity
RWM	ProShares Short Russell2000	RWM	ETF
RWR	SPDR Dow Jones REIT ETF	RWR	ETF
RWT	REDWOOD TRUST, INC.	RWT	Equity
RXN	Rexnord Corporation	RXN	Equity
RY	ROYAL BANK OF CANADA	RY	Equity
RYAAY	Ryanair Holdings plc	RYAAY	Equity
RYAM	RAYONIER ADVANCED MATERIALS INC.	RYAM	Equity
RYI	Ryerson Holding Corporation	RYI	Equity
RYN	Rayonier Inc.	RYN	Equity
S	SPRINT CORPORATION	S	Equity
SA	SEABRIDGE GOLD INC	SA	Equity
SABR	SABRE CORPORATION	SABR	Equity
SAFM	SANDERSON FARMS IN	SAFM	Equity
SAFT	Safety Insurance Group Inc.	SAFT	Equity
SAGE	Sage Therapeutics, Inc.	SAGE	Equity
SAIC	Science Applications International Corporation	SAIC	Equity
SAIL	SailPoint Technologies Holdings, Inc.	SAIL	Equity
SALT	Scorpio Bulkers Inc.	SALT	Equity
SAM	Boston Beer Company, Inc.	SAM	Equity
SAN	BANCO SANTANDER, S.A.	SAN	Equity
SAND	Sandstorm Gold Ltd.	SAND	Equity
SANM	Sanmina Corporation	SANM	Equity
SANW	S&W SEED COMPANY	SANW	Equity
SAP	SAP AG	SAP	Equity
SAVE	SPIRIT AIRLINES, INC.	SAVE	Equity
SB	Safe Bulkers Inc.	SB	Equity
SBAC	SBA COMMUNICATION CORP	SBAC	Equity
SBGI	SINCLAIR BROADCASTING GRP	SBGI	Equity
SBGL	SIBANYE GOLD LIMITED	SBGL	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
SBH	Sally Beauty Holdings Inc	SBH	Equity
SBLK	Star Bulk Carriers Corporation	SBLK	Equity
SBNY	Signature Bank	SBNY	Equity
SBRA	Sabra Health Care REIT, Inc.	SBRA	Equity
SBS	Companhia de Saneamento Basico do Estado de Sao Paulo	SBS	Equity
SBUX	STARBUCKS CORPORATION	SBUX	Equity
SC	SANTANDER CONSUMER USA HOLDINGS INC.	SC	Equity
SCCO	SOUTHERN COPPER CORPORATION	SCCO	Equity
SCHL	Scholastic Corporation	SCHL	Equity
SCHN	SCHNITZER STEEL INDUSTRIES, INC	SCHN	Equity
SCHW	THE CHARLES SCHWAB CORPORATION	SCHW	Equity
SCI	SERVICE CORPORATION INTERNATIONAL	SCI	Equity
SCO	ProShare UltraShort DJ UBS Crude Oil	SCO	ETF
SCS	STEELCASE, INC. CLASS A	SCS	Equity
SCVL	Shoe Carnival Inc	SCVL	Equity
SDLP	Seadrill Partners LLC	SDLP	Equity
SDOW	ProShares UltraPro Short Dow30	SDOW	ETF
SDR	SandRidge Mississippian Trust II	SDR	Equity
SDS	PROSHARES ULTRASHORT S&P500	SDS	ETF
SDT	SandRidge Mississippian Trust I	SDT	Equity
SDY	SPDR S&P Dividend ETF	SDY	ETF
SE	Sea Limited	SE	Equity
SEAC	SeaChange International, Inc.	SEAC	Equity
SEAS	SEAWORLD ENTERTAINMENT, INC.	SEAS	Equity
SEDG	SolarEdge Technologies, Inc.	SEDG	Equity
SEE	SEALED AIR CORP	SEE	Equity
SEIC	SEI INVESTMENTS CO	SEIC	Equity
SEM	Select Medical Holdings Corporation	SEM	Equity
SEMG	SemGroup Corporation	SEMG	Equity
SENS	Senseonics Holdings Inc.	SENS	Equity
SERV	ServiceMaster Global Holdings, Inc.	SERV	Equity
SESN	Sesen Bio, Inc.	SESN	Equity
SF	Stifel Financial Corp.	SF	Equity
SFIX	Stitch Fix, Inc.	SFIX	Equity
SFL	SHIP FINANCE INTERNATIONAL LIMITED	SFL	Equity
SFLY	Shutterfly Inc	SFLY	Equity
SFM	SPROUTS FARMERS MARKET, INC.	SFM	Equity
SFUN	Fang Holdings Limited	SFUN	Equity
SGEN	Seattle Genetics, Inc.	SGEN	Equity
SGH	SMART Global Holdings, Inc.	SGH	Equity
SGMO	Sangamo Therapeutics, Inc.	SGMO	Equity
SGMS	SCIENTIFIC GAMES CORPORATION	SGMS	Equity
SH	ProShares Short S&P 500	SH	ETF
SHAK	Shake Shack Inc.	SHAK	Equity
SHLX	SHELL MIDSTREAM PARTNERS, L.P.	SHLX	Equity
SHO	Sunstone Hotel Investors, Inc.	SHO	Equity
SHOO	STEVEN MADDEN, LTD.	SHOO	Equity
SHOP	Shopify Inc.	SHOP	Equity
SHOS	Sears Hometown and Outlet Stores Inc.	SHOS	Equity
SHW	THE SHERWIN-WILLIAMS COMPANY	SHW	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
SHY	Ishares Barclays 1-3 Year Treasury Bond	SHY	ETF
SID	COMPANHIA SIDERURGICAL NACIONAL ADR	SID	Equity
SIEN	Sientra, Inc.	SIEN	Equity
SIG	SIGNET JEWELERS LIMITEDSHS	SIG	Equity
SIL	Global X Silver Miners ETF	SIL	ETF
SIMO	Silicon Motion Technology Corp.	SIMO	Equity
SINA	SINA CORPORATION	SINA	Equity
SIRI	SIRIUS XM RADIO INC.	SIRI	Equity
SITC	SITE Centers Corporation	SITC	Equity
SIVB	SVB Financial Group	SIVB	Equity
SIVR	ETFS Physical Silver	SIVR	ETF
SIX	Six Flags Entertainment Corporation	SIX	Equity
SJM	J M SMUCKER COMPANY (THE)	SJM	Equity
SJNK	SPDR Barclays Short Term High Yield Bond ETF	SJNK	ETF
SJT	San Juan Basin Royalty Trust	SJT	Equity
SKF	ProShares UltraShort Financials	SKF	ETF
SKT	Tanger Factory Outlet Centers, Inc.	SKT	Equity
SKX	SKETCHERS USA INCORPORATED	SKX	Equity
SKYW	SkyWest Inc.	SKYW	Equity
SLAB	SILICON LABORATORIES INC.	SLAB	Equity
SLB	SCHLUMBERGER LIMITED	SLB	Equity
SLCA	US Silica Holdings Inc.	SLCA	Equity
SLG	SL Green Realty Corp.	SLG	Equity
SLGN	Silgan Holdings Inc.	SLGN	Equity
SLM	SLM CORP	SLM	Equity
SLV	ISHARES SILVER TRUST	SLV	ETF
SLX	VanEck Vectors Steel ETF	SLX	ETF
SM	SM Energy Company	SM	Equity
SMFG	SUMITOMO MITSUI FINANCIAL GROUP, INC.	SMFG	Equity
SMG	The Scotts Miracle-Gro Company	SMG	Equity
SMH	MARKET VECTORS SEMICONDUCTOR ETF	SMH	ETF
SMLP	Summit Midstream Partners	SMLP	Equity
SMRT	Stein Mart, Inc.	SMRT	Equity
SMSI	Smith Micro Software, Inc.	SMSI	Equity
SMTC	SEMTECH CORPORATION	SMTC	Equity
SNA	SNAP-ON INCORPORATED	SNA	Equity
SNAP	Snap, Inc	SNAP	Equity
SNBR	Sleep Number Corporation	SNBR	Equity
SND	Smart Sand, Inc.	SND	Equity
SNE	SONY CORPORATION	SNE	Equity
SNH	Senior Housing Properties Trust	SNH	Equity
SNN	SMITH & NEPHEW PLC	SNN	Equity
SNP	CHINA PETROLEUM AND CHEMICAL CORP	SNP	Equity
SNPS	Synopsys Inc.	SNPS	Equity
SNR	New Senior Investment Group Inc.	SNR	Equity
SNSS	Sunesis Pharmaceuticals Inc.	SNSS	Equity
SNV	SYNOVUS FINANCIAL CORPORATION	SNV	Equity
SNX	Synnex Corporation	SNX	Equity
SNY	Sanofi	SNY	Equity
SO	SOUTHERN COMPANY	SO	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
SOCL	GLOBAL X SOCIAL MEDIA INDEX ETF	SOCL	ETF
SOGO	Sogou Inc.	SOGO	Equity
SOHU	SOHU.COM INC.	SOHU	Equity
SOL	ReneSola Ltd (ADS)	SOL	Equity
SON	Sonoco Products Co.	SON	Equity
SONO	Sonos, Inc.	SONO	Equity
SORL	SORL Auto Parts, Inc.	SORL	Equity
SOXL	DIREXION DAILY SEMICONDUCTOR BULL 3X ETF	SOXL	ETF
SOXS	Direxion Daily Semiconductor Bear 3X ETF	SOXS	ETF
SOXX	iShares PHLX Semiconductor Index Fund	SOXX	ETF
SOYB	Teucrium Soybean ETF	SOYB	ETF
SPB	Spectrum Brands Holdings Inc.	SPB	Equity
SPG	SIMON PROPERTY GROUP INC.	SPG	Equity
SPGI	S&P Global Inc.	SPGI	Equity
SPH	Suburban Propane Partners, L.P.	SPH	Equity
SPHS	Sophiris Bio, Inc.	SPHS	Equity
SPLK	SPLUNK, INC.	SPLK	Equity
SPLV	PowerShares S&P 500 Low Volatility ETF	SPLV	ETF
SPN	SUPERIOR ENERGY SERVICES, INC	SPN	Equity
SPOT	Spotify Technology S.A.	SPOT	Equity
SPPI	SPECTRUM PHARMACEUTICALS, INC.	SPPI	Equity
SPR	Spirit Aerosystems Holdings Inc	SPR	Equity
SPWH	Sportsman's Warehouse Holdings, Inc.	SPWH	Equity
SPWR	SUNPOWER CORPORATION	SPWR	Equity
SPXC	SPX Corporation	SPXC	Equity
SPXL	Direxion Daily S&P 500 Bull 3X Shares	SPXL	ETF
SPXS	Direxion Daily S&P 500 Bear 3X Shares (1:5 reverse	SPXS	ETF
SPXU	PROSHARES ULTRAPRO SHORT S&P500	SPXU	ETF
SPY	SPDR S&P 500 TRUST	SPY	ETF
SQ	Square, Inc.	SQ	Equity
SQM	CHEMICAL & MINING CO. OF CHILE INC.	SQM	Equity
SQQQ	PROSHARES ULTRAPRO SHORT QQQ	SQQQ	ETF
SRC	Spirit Realty Capital, Inc.	SRC	Equity
SRCI	SRC Energy Inc.	SRCI	Equity
SRCL	STERICYCLE, INC.	SRCL	Equity
SRE	SEMPRA ENERGY	SRE	Equity
SREV	ServiceSource International, Inc.	SREV	Equity
SRG	Seritage Growth Properties	SRG	Equity
SRI	Stoneridge, Inc.	SRI	Equity
SRNE	Sorrento Therapeutics, Inc.	SRNE	Equity
SRPT	SAREPTA THERAPEUTICS, INC.	SRPT	Equity
SRS	ProShares UltraShort Real Estate	SRS	ETF
SRTY	ProShares UltraPro Short Russell2000	SRTY	ETF
SSI	Stage Stores Inc.	SSI	Equity
SSNC	SS&C Technologies Holdings, Inc.	SSNC	Equity
SSO	PROSHARES ULTRA S&P500	SSO	ETF
SSP	The E.W. Scripps Company	SSP	Equity
SSRM	SSR Mining Inc.	SSRM	Equity
SSTK	SHUTTERSTOCK, INC.	SSTK	Equity
SSW	SEASPAN CORPORATION	SSW	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
SSYS	STRATASYS INC.	SSYS	Equity
ST	Sensata Technologies Holding	ST	Equity
STAA	STAAR SURGICAL COMPANY	STAA	Equity
STAG	STAG Industrial, Inc.	STAG	Equity
STAR	ISTAR FINANCIAL INC.	STAR	Equity
STAY	EXTENDED STAY AMERICA, INC.	STAY	Equity
STE	STERIS Corp.	STE	Equity
STKL	SunOpta Inc.	STKL	Equity
STLD	STEEL DYNAMICS INC	STLD	Equity
STM	STMicroelectronics NV	STM	Equity
STML	Stemline Therapeutics, Inc.	STML	Equity
STMP	STAMPS.COM, INC	STMP	Equity
STNG	SCORPIO TANKERS, INC.	STNG	Equity
STON	Stonemor Partners LP	STON	Equity
STOR	STORE Capital Corporation	STOR	Equity
STRA	STRAYER EDUCATION, INC.	STRA	Equity
STRL	Sterling Construction Company Inc.	STRL	Equity
STT	STATE STREET CORPORATION	STT	Equity
STWD	Starwood Property Trust, Inc.	STWD	Equity
STX	SEAGATE TECHNOLOGY PUBLIC LIMITED COMPANY	STX	Equity
STZ	CONSTELLATION BRANDS INC.	STZ	Equity
SU	SUNCOR ENERGY INC.	SU	Equity
SUM	Summit Materials, Inc.	SUM	Equity
SUN	SUNOCO L.P.	SUN	Equity
SUP	SUPERIOR INDUSTRIES INTERNATIONAL, INC.	SUP	Equity
SUPN	SUPERNUS PHARMACEUTICALS, INC.	SUPN	Equity
SVXY	ProShares Short VIX Short-Term Futures	SVXY	ETF
SWCH	Switch, Inc.	SWCH	Equity
SWIR	SIERRA WIRELESS, INC	SWIR	Equity
SWK	Stanley Black & Decker	SWK	Equity
SWKS	SKYWORKS SOLUTIONS INC.	SWKS	Equity
SWN	SOUTHWESTERN ENERGY COMPANY	SWN	Equity
SXC	SunCoke Energy, Inc.	SXC	Equity
SYF	SYNCHRONY FINANCIAL	SYF	Equity
SYK	STRYKER CORP	SYK	Equity
SYMC	SYMANTEC CORPORATION	SYMC	Equity
SYNA	SYNAPTICS, INC.	SYNA	Equity
SYNC	Synacor, Inc.	SYNC	Equity
SYNH	Syneos Health, Inc.	SYNH	Equity
SYY	SYSCO CORPORATION	SYY	Equity
T	AT&T, INC.	T	Equity
TA	TravelCenters of America LLC	TA	Equity
TACO	Del Taco Restaurants, Inc.	TACO	Equity
TAL	TAL International Group Inc	TAL	Equity
TAN	Guggenheim Solar ETF	TAN	ETF
TAP	Molson Coors Brewing Co.	TAP	Equity
TBF	ProShares Short 20+ Year Treasury	TBF	ETF
TBPH	Theravance Biopharma, Inc.	TBPH	Equity
TBT	PROSHARES ULTRASHORT 20+ YEAR TREASURY	TBT	ETF
TCBI	Texas Capital Bancshares, Inc.	TCBI	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
TCF	TCF Financial Corporation	TCF	Equity
TCO	Taubman Centers, Inc.	TCO	Equity
TCP	TC Pipelines, LP	TCP	Equity
TCRD	THL Credit, Inc.	TCRD	Equity
TCS	THE CONTAINER STORE GROUP, INC.	TCS	Equity
TCX	TUCOWS, INC	TCX	Equity
TD	TORONTO DOMINION BANK	TD	Equity
TDC	Teradata Corp.	TDC	Equity
TDG	TransDigm Group, Inc.	TDG	Equity
TDOC	Teladoc, Inc.	TDOC	Equity
TDS	TELEPHONE & DATA SYSTEMS INC.	TDS	Equity
TEAM	Atlassian Corporation Plc	TEAM	Equity
TECD	TECH DATA CORP	TECD	Equity
TECK	Teck Resources Limited	TECK	Equity
TECL	Direxion Daily Technology Bull 3X ETF	TECL	ETF
TECS	Direxion Daily Technology Bear 3X ETF	TECS	ETF
TEF	TELEFONICA S.A.	TEF	Equity
TEL	TE Connectivity Ltd.	TEL	Equity
TELL	Tellurian Inc.	TELL	Equity
TEN	TENNECO INC	TEN	Equity
TEO	Telecom Argentina S.A.	TEO	Equity
TER	TERADYNE, INC	TER	Equity
TERP	TERRAFORM POWER, INC.	TERP	Equity
TEVA	TEVA PHARMACEUTICAL INDUSTRIES LIMITED	TEVA	Equity
TEX	TEREX CORPORATION	TEX	Equity
TFSL	TFS Financial Corporation	TFSL	Equity
TGE	Tallgrass Energy, LP	TGE	Equity
TGH	Textainer Group Holdings Limited	TGH	Equity
TGI	Triumph Group, Inc.	TGI	Equity
TGNA	TEGNA, Inc.	TGNA	Equity
TGP	Teekay LNG Partners LP	TGP	Equity
TGT	TARGET CORPORATION	TGT	Equity
TGTX	TG THERAPEUTICS, INC.	TGTX	Equity
THC	TENET HEALTHCARE CORP (25 shrs)	THC	Equity
THO	THOR INDUSTRIES INC	THO	Equity
THR	Thermon Group Holdings Inc	THR	Equity
THRM	Gentherm Inc	THRM	Equity
THS	Treehouse Foods, Inc.	THS	Equity
TI	Telecom Italia S.p.A.	TI	Equity
TIF	TIFFANY & COMPANY	TIF	Equity
TIP	iShares Barclays TIPS Bond Fund	TIP	ETF
TITN	Titan Machinery, Inc.	TITN	Equity
TIVO	Tivo Corporation	TIVO	Equity
TJX	THE TJX COMPANIES, INC.	TJX	Equity
TK	Teekay Corp	TK	Equity
TKC	Turkcell Iletisim Hizmetleri AS	TKC	Equity
TKR	TIMKEN COMPANY	TKR	Equity
TLGT	Teligent, Inc.	TLGT	Equity
TLRD	Tailored Brands, Inc.	TLRD	Equity
TLRY	Tilray, Inc.	TLRY	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
TLT	ISHARES 20+ YEAR TREASURY BOND ETF	TLT	ETF
TM	TOYOTA MOTOR CORP	TM	Equity
TMF	DIREXION DAILY 20+ YR TRSY BULL 3X ETF	TMF	ETF
TMK	Torchmark Corporation	TMK	Equity
TMO	Thermo Fisher Scientific Inc.	TMO	Equity
TMST	TimkenSteel Corporation	TMST	Equity
TMUS	T-MOBILE US, INC.	TMUS	Equity
TMV	Direxion Daily 20 Year Treasury Bear 3X Shares	TMV	ETF
TNA	DIREXION DAILY SMALL CAP BULL 3X SHARES	TNA	ETF
TNDM	Tandem Diabetes Care, Inc.	TNDM	Equity
TNET	TRINET GROUP, INC.	TNET	Equity
TNK	Teekay Tankers Ltd	TNK	Equity
TNP	TSAKOS ENERGY NAVIGATION LTD	TNP	Equity
TOL	TOLL BROTHERS INC.	TOL	Equity
TOO	Teekay Offshore Partners LP	TOO	Equity
TOT	TOTAL SA	TOT	Equity
TOUR	TUNIU CORPORATION	TOUR	Equity
TOWN	TowneBank	TOWN	Equity
TPC	Tutor Perini Corporation	TPC	Equity
TPCO	Tribune Publishing Company	TPCO	Equity
TPH	TRI POINTE HOMES, INC.	TPH	Equity
TPR	Tapestry, Inc.	TPR	Equity
TPX	TEMPUR-PEDIC INTERNATIONAL INC.	TPX	Equity
TQQQ	ProShares Ultra Pro QQQ	TQQQ	ETF
TRCO	Tribune Media Company	TRCO	Equity
TREE	LendingTree, Inc.	TREE	Equity
TREX	Trex Co. Inc.	TREX	Equity
TRGP	Targa Resources Corp.	TRGP	Equity
TRI	Thomson Reuters Corporation	TRI	Equity
TRIP	TRIPADVISOR INC.	TRIP	Equity
TRMB	TRIMBLE NAVIGATION LIMITED	TRMB	Equity
TRMK	Trustmark Corporation	TRMK	Equity
TRN	TRINITY INDUSTRIES INC.	TRN	Equity
TROW	T. ROWE PRICE GROUP INC.	TROW	Equity
TROX	Tronox Ltd.	TROX	Equity
TRP	TransCanada Corp.	TRP	Equity
TRQ	Turquoise Hill Resources Ltd.	TRQ	Equity
TRTN	Triton International Ltd	TRTN	Equity
TRU	TransUnion	TRU	Equity
TRUE	TRUECAR, INC.	TRUE	Equity
TRUP	Trupanion, Inc.	TRUP	Equity
TRV	THE TRAVELERS COMPANIES, INC.	TRV	Equity
TRVG	trivago N.V.	TRVG	Equity
TRVN	Trevena, Inc.	TRVN	Equity
TRX	Tanzanian Royalty Exploration	TRX	Equity
TRXC	TransEnterix, Inc.	TRXC	Equity
TS	TENARIS SA	TS	Equity
TSCO	TRACTOR SUPPLY COMPANY	TSCO	Equity
TSE	Trinseo S.A.	TSE	Equity
TSEM	TOWER SEMICONDUCTOR LTD.	TSEM	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
TSG	The Stars Group Inc.	TSG	Equity
TSLA	TESLA MOTORS, INC.	TSLA	Equity
TSM	TAIWAN SEMICONDUCTOR MFG. CO.	TSM	Equity
TSN	TYSON FOODS, INC.	TSN	Equity
TSS	Total System Services, Inc.	TSS	Equity
TSU	Tim Participacoes SA	TSU	Equity
TTC	THE TORO COMPANY	TTC	Equity
TTD	The Trade Desk, Inc.	TTD	Equity
TTEK	Tetra Tech, Inc.	TTEK	Equity
TTM	Tata Motors Ltd.	TTM	Equity
TTMI	TTM Technologies, Inc.	TTMI	Equity
TTNP	Titan Pharmaceuticals Inc.	TTNP	Equity
TTOO	T2 Biosystems, Inc.	TTOO	Equity
TTPH	TETRAPHASE PHARMACEUTICALS, INC.	TTPH	Equity
TTS	TILE SHOP HOLDINGS, INC.	TTS	Equity
TTWO	TAKE-TWO INTERACTIVE	TTWO	Equity
TU	Telus Corporation	TU	Equity
TUES	Tuesday Morning Corporation	TUES	Equity
TUP	Tupperware Brands Corp	TUP	Equity
TUR	ISHARES MSCI TURKEY	TUR	ETF
TV	GRUPO TELEVISIA, S.A.B.	TV	Equity
TVTY	Tivity Health, Inc.	TVTY	Equity
TW	Tradeweb Markets Inc.	TW	Equity
TWI	Titan International, Inc.	TWI	Equity
TWLO	Twilio, Inc.	TWLO	Equity
TWM	Proshares UltrShort Russell 2000(reverse split)	TWM	Equity
TWNK	Hostess Brands, Inc.	TWNK	Equity
TWO	Two Harbors Investment Corporation	TWO	Equity
TWOU	2U, Inc.	TWOU	Equity
TWTR	TWITTER INC.	TWTR	Equity
TX	Ternium S.A.	TX	Equity
TXMD	THERAPEUTICSMD, INC	TXMD	Equity
TXN	TEXAS INSTRUMENTS INC.	TXN	Equity
TXRH	Texas Roadhouse, Inc.	TXRH	Equity
TXT	TEXTRON INC.	TXT	Equity
TYL	Tyler Technologies, Inc.	TYL	Equity
TZA	DIREXION DAILY SMALL CAP BEAR 3X SHARES	TZA	ETF
UA	UNDER ARMOUR, INC.	UA	Equity
UAA	Under Armour, Inc.	UAA	Equity
UAL	UNITED CONTINENTAL HOLDINGS, INC.	UAL	Equity
UAN	CVR Partners LP	UAN	Equity
UBER	Uber Technologies, Inc.	UBER	Equity
UBIO	ProShares UltraPro Nasdaq Biotechnology	UBIO	ETF
UBNT	Ubiquiti Networks Inc.	UBNT	Equity
UBS	UBS Group Ag	UBS	Equity
UCO	PROSHARES ULTRA DJ-UBS CRUDE OIL	UCO	ETF
UCTT	Ultra Clean Holdings, Inc.	UCTT	Equity
UDN	PowerShares DB US Dollar Index Bearish Fund	UDN	ETF
UDOW	ProShares UltraPro Dow30	UDOW	ETF
UDR	UDR, Inc.	UDR	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
UEC	Uranium Energy Corp	UEC	Equity
UEIC	UNIVERSAL ELECTRONICS, INC.	UEIC	Equity
UEPS	NET 1 UEPS TECHNOLOGIES	UEPS	Equity
UFPI	Universal Forest Products, Inc.	UFPI	Equity
UFS	Domtar, Corp.	UFS	Equity
UGA	United States Gasoline	UGA	ETF
UGI	UGI Corporation	UGI	Equity
UGL	ProShares Ultra Gold	UGL	ETF
UHS	UNIVERSAL HEALTH SERVICES INC	UHS	Equity
UIHC	UNITED INSURANCE HOLDINGS CORPORATION	UIHC	Equity
UIS	UNISYS CORPORATION	UIS	Equity
UL	Unilever PLC	UL	Equity
ULTA	ULTA SALON COSMETICS & FRAGRANCE INC	ULTA	Equity
UN	UNILEVER NV	UN	Equity
UNFI	UNITED NATURAL FOODS, INC.	UNFI	Equity
UNG	UNITED STATES NATURAL GAS	UNG	ETF
UNH	UNITEDHEALTH GROUP INCORPORATED	UNH	Equity
UNIT	Uniti Group Inc.	UNIT	Equity
UNM	Unum Group	UNM	Equity
UNP	UNION PACIFIC CORPORATION	UNP	Equity
UNT	UNIT CORPORATION	UNT	Equity
UNVR	Univar Inc.	UNVR	Equity
UPL	Ultra Petroleum Corp.	UPL	Equity
UPRO	ProShares Ultrapro S&P 500	UPRO	ETF
UPS	UNITED PARCEL SERVICE, INC.	UPS	Equity
URA	Global X Uranium ETF	URA	ETF
URBN	URBAN OUTFITTERS INC	URBN	Equity
URE	ProShares Ultra Real Estate	URE	ETF
URI	UNITED RENTALS, INC.	URI	Equity
URTY	ProShares UltraPro Russell2000	URTY	ETF
USAC	USA COMPRESSION PARTNERS, L.P.	USAC	Equity
USAT	USA Technologies Inc.	USAT	Equity
USB	U.S. BANCORP	USB	Equity
USCR	U.S. Concrete, Inc.	USCR	Equity
USD	ProShares Ultra Semiconductors	USD	ETF
USFD	US Foods Holding Corp.	USFD	Equity
USMV	iShares MSCI USA Minimum Volatility	USMV	ETF
USNA	USANA Health Sciences, Inc.	USNA	Equity
USO	UNITED STATES OIL FUND	USO	ETF
UTHR	UNITED THERAPEUTICS CORP	UTHR	Equity
UTX	UNITED TECHNOLOGIES CORPORATION	UTX	Equity
UUP	POWERSHARES DB US DOLLAR INDEX BULLISH	UUP	ETF
UUUU	Energy Fuels Inc.	UUUU	Equity
UVE	UNIVERSAL INSURANCE HOLDINGS, INC.	UVE	Equity
UVV	UNIVERSAL CORPORATION	UVV	Equity
UVXY	PROSHARES ULTRA VIX SHORT-TERM FUT ETF	UVXY	ETF
UWM	ProShares Ultra Russell2000	UWM	ETF
UXIN	Uxin Limited	UXIN	Equity
UYG	ProShares Ultra Financials	UYG	ETF
V	VISA INC.	V	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
VAC	Marriott Vacations Worldwide Corp.	VAC	Equity
VALE	VALE S.A.	VALE	Equity
VAR	VARIAN MEDICAL SYSTEMS, INC.	VAR	Equity
VBLT	Vascular Biogenics Ltd.	VBLT	Equity
VBR	Vanguard Small-Cap Value ETF	VBR	ETF
VC	Visteon Corp.	VC	Equity
VCEL	Vericel Corporation	VCEL	Equity
VCRA	Vocera Communications, Inc.	VCRA	Equity
VCYT	Veracyte, Inc.	VCYT	Equity
VDE	Vanguard Energy ETF	VDE	ETF
VEA	Vanguard FTSE Developed Markets ETF	VEA	ETF
VEC	Vectrus, Inc.	VEC	Equity
VECO	VEECO INSTRUMENTS	VECO	Equity
VEEV	VEEVA SYSTEMS INC.	VEEV	Equity
VEON	VEON Ltd.	VEON	Equity
VER	VEREIT, Inc.	VER	Equity
VFC	VF CORPORATION	VFC	Equity
VFH	Vanguard Financials ETF	VFH	ETF
VG	Vonage Holdings Corporation	VG	Equity
VGK	Vanguard FTSE Europe ETF	VGK	ETF
VGR	VECTOR GROUP LTD.	VGR	Equity
VHC	VIRNETX HOLDING CORP	VHC	Equity
VIAB	VIACOM, INC.	VIAB	Equity
VIAV	Viavi Solutions Inc.	VIAV	Equity
VICR	Vicor Corporation	VICR	Equity
VIG	Vanguard Dividend Appreciation ETF	VIG	ETF
VIPS	VIPSHOP HOLDINGS LIMITED	VIPS	Equity
VIRT	Virtu Financial, Inc.	VIRT	Equity
VIV	Telefonica Brasil S.A.	VIV	Equity
VIVO	Meridian Bioscience Inc.	VIVO	Equity
VIXM	ProShares VIX Mid-Term Futures	VIXM	ETF
VIXY	ProShares VIX Short-Term Futures ETF	VIXY	ETF
VJET	VOXELJET AG	VJET	Equity
VKTX	Viking Therapeutics, Inc.	VKTX	Equity
VLO	VALERO ENERGY CORPORATION	VLO	Equity
VLRS	Controladora Vuela Compania de	VLRS	Equity
VLY	VALLEY NATIONAL BANCORP	VLY	Equity
VMC	VULCAN MATERIALS COMPANY	VMC	Equity
VMI	Valmont Industries, Inc.	VMI	Equity
VMW	VMWARE, INC.	VMW	Equity
VNDA	Vanda Pharmaceuticals, Inc.	VNDA	Equity
VNET	21Vianet Group Inc	VNET	Equity
VNO	VORNADO REALTY TRUST	VNO	Equity
VNOM	Viper Energy Partners LP	VNOM	Equity
VNQ	Vanguard REIT ETF	VNQ	ETF
VNTR	Venator Materials PLC	VNTR	Equity
VOC	Voc Energy Trust	VOC	Equity
VOD	VODAFONE GROUP PUBLIC LIMITED COMPANY	VOD	Equity
VOE	Vanguard Mid-Cap Value ETF	VOE	ETF
VOO	Vanguard S&P 500 ETF	VOO	ETF

Und Symbol	Company Name	Deriv Symbol	Inst Type
VOXX	VOXX International Corporation	VOXX	Equity
VOYA	VOYA FINANCIAL INC.	VOYA	Equity
VRA	Vera Bradley, Inc.	VRA	Equity
VRAY	ViewRay, Inc.	VRAY	Equity
VREX	Varex Imaging Corporation	VREX	Equity
VRNS	Varonis Systems, Inc.	VRNS	Equity
VRNT	Verint Systems, Inc.	VRNT	Equity
VRSK	Verisk Analytics, Inc.	VRSK	Equity
VRSN	VERISIGN, INC.	VRSN	Equity
VRTX	VERTEX PHARMACEUTICALS INCORPORATED	VRTX	Equity
VSAT	ViaSat, Inc.	VSAT	Equity
VSH	VISHAY INTERTECHNOLOGY	VSH	Equity
VSI	Vitamin Shoppe Inc.	VSI	Equity
VSLR	VIVINT SOLAR, INC.	VSLR	Equity
VST	Vistra Energy Corp.	VST	Equity
VSTM	Verastem, Inc.	VSTM	Equity
VSTO	Vista Outdoor Inc.	VSTO	Equity
VT	Vanguard Total World Stock ETF	VT	ETF
VTI	Vanguard Total Stock Market ETF	VTI	ETF
VTNR	VERTEX ENERGY, INC.	VTNR	Equity
VTR	Ventas, Inc.	VTR	Equity
VUZI	Vuzix Corporation	VUZI	Equity
VVUS	VIVUS INC.	VVUS	Equity
VVV	Valvoline Inc.	VVV	Equity
VWO	Vanguard MSCI Emerging Markets ETF	VWO	ETF
VXUS	Vanguard Total International Stock ETF	VXUS	ETF
VXX	iPath Series B S&P 500 VIX Short-Term Futures ETN	VXX	ETF
VXZ	iPath Series B S&P 500 VIX Mid-Term Futures ETN	VXZ	ETF
VYGR	Voyager Therapeutics, Inc.	VYGR	Equity
VYM	Vanguard High Dividend Yield ETF	VYM	ETF
VZ	VERIZON COMMUNICATIONS INC.	VZ	Equity
W	Wayfair Inc.	W	Equity
WAB	Westinghouse Air Brake Technologies Corporation	WAB	Equity
WAGE	WageWorks, Inc.	WAGE	Equity
WAIR	Wesco Aircraft Holdings, Inc.	WAIR	Equity
WAL	Western Alliance Bancorp	WAL	Equity
WAT	WATERS CORPORATION	WAT	Equity
WATT	Energous Corporation	WATT	Equity
WB	WEIBO CORP. (ADR)	WB	Equity
WBA	Walgreens Boots Alliance, Inc.,	WBA	Equity
WBAI	500.COM LIMITED	WBAI	Equity
WBC	WABCO Holdings Inc.	WBC	Equity
WBT	Welbilt, Inc.	WBT	Equity
WCC	WESCO INTERNATIONAL	WCC	Equity
WCG	WELLCARE HEALTH PLAN INC	WCG	Equity
WCN	Waste Connections Inc.	WCN	Equity
WD	Walker & Dunlop, Inc.	WD	Equity
WDAY	Workday, Inc.	WDAY	Equity
WDC	WESTERN DIGITAL CORPORATION	WDC	Equity
WDR	WADDELL & REED FINANCIAL	WDR	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
WEAT	Teucrium Wheat ETF	WEAT	ETF
WEC	WISCONSIN ENERGY CORP.	WEC	Equity
WELL	Welltower Inc.	WELL	Equity
WEN	The Wendy's Company	WEN	Equity
WERN	WERNER ENTERPRISES INC.	WERN	Equity
WES	Western Midstream Partners L.P.	WES	Equity
WETF	WisdomTree Investments, Inc	WETF	Equity
WEX	WEX Inc.	WEX	Equity
WFC	WELLS FARGO & COMPANY	WFC	Equity
WGO	WINNEBAGO INDUSTRIES, INC	WGO	Equity
WH	Wyndham Hotels & Resorts, Inc.	WH	Equity
WHR	WHIRLPOOL CORPORATION	WHR	Equity
WIFI	Boingo Wireless, Inc.	WIFI	Equity
WING	Wingstop Inc.	WING	Equity
WIT	WIPRO LTD.	WIT	Equity
WIX	WIX.COM LTD.	WIX	Equity
WK	Workiva Inc.	WK	Equity
WLH	WILLIAM LYON HOMES	WLH	Equity
WLK	Westlake Chemical Corp	WLK	Equity
WLKP	Westlake Chemical Partners LP	WLKP	Equity
WLL	WHITING PETROLEUM CORPORATION	WLL	Equity
WLTW	Willis Towers Watson Public Limited Company	WLTW	Equity
WM	WASTE MANAGEMENT, INC.	WM	Equity
WMB	WILLIAMS COMPANIES, INC.	WMB	Equity
WMC	Western Asset Mortgage Capital Corporation	WMC	Equity
WMGI	Wright Medical Group N.V.	WMGI	Equity
WMS	Advanced Drainage Systems, Inc.	WMS	Equity
WMT	WAL-MART INC.	WMT	Equity
WNC	WABASH NATIONAL CORP.	WNC	Equity
WOR	WORTHINGTON INDUSTRIES, INC.	WOR	Equity
WP	Worldpay, Inc.	WP	Equity
WPC	W.P. Carey Inc.	WPC	Equity
WPG	WASHINGTON PRIME GROUP INC.	WPG	Equity
WPM	Wheaton Precious Metals Corporation	WPM	Equity
WPP	WPP plc	WPP	Equity
WPRT	WESTPORT INNOVATIONS INC.	WPRT	Equity
WPX	WPX Energy Inc.	WPX	Equity
WRK	WestRock Company	WRK	Equity
WRLD	WORLD ACCEPTANCE CORPORATION	WRLD	Equity
WSBF	Waterstone Financial, Inc.	WSBF	Equity
WSM	WILLIAMS-SONOMA INC	WSM	Equity
WSR	Whitestone REIT	WSR	Equity
WTFC	Wintrust Financial Corporation	WTFC	Equity
WTI	W&T OFFSHORE INC	WTI	Equity
WTR	Aqua America Inc.	WTR	Equity
WTTR	Select Energy Services, Inc.	WTTR	Equity
WU	THE WESTERN UNION COMPANY	WU	Equity
WUBA	58.COM INC.	WUBA	Equity
WW	Weight Watchers International, Inc.	WW	Equity
WWE	World Wrestling Entertainment Inc	WWE	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
WWW	WOLVERINE WORLD WIDE INC	WWW	Equity
WY	WEYERHAEUSER COMPANY	WY	Equity
WYND	Wyndham Destinations, Inc.	WYND	Equity
WYNN	WYNN RESORTS LTD.	WYNN	Equity
X	UNITED STATES STEEL CORPORATION	X	Equity
XAN	Exantas Capital Corporation	XAN	Equity
XBI	SPDR S&P Biotech ETF	XBI	ETF
XBIT	XBiotech, Inc.	XBIT	Equity
XEC	CIMAREX ENERGY CO.	XEC	Equity
XEL	XCEL ENERGY INC	XEL	Equity
XENT	Intersect ENT, Inc.	XENT	Equity
XES	SPDR S&P Oil & Gas Equipment & Svcs ETF	XES	ETF
XHB	SPDR S&P HOMEBUILDERS	XHB	ETF
XHR	Xenia Hotels & Resorts, Inc.	XHR	Equity
XIN	Xinyuan Real Estate Company LTD	XIN	Equity
XLB	MATERIALS SELECT SECTOR SPDR	XLB	ETF
XLC	Communication Services Select Sect SPDR ETF	XLC	ETF
XLE	ENERGY SELECT SECTOR SPDR	XLE	ETF
XLF	FINANCIAL SELECT SECTOR SPDR	XLF	ETF
XLI	INDUSTRIAL SELECT SECTOR SPDR	XLI	ETF
XLK	TECHNOLOGY SELECT SECTOR SPDR	XLK	ETF
XLNX	XILINX INC.	XLNX	Equity
XLP	CONSUMER STAPLES SELECT SECTOR SPDR	XLP	ETF
XLRE	Real Estate Select Sector SPDR	XLRE	ETF
XLRN	ACCELERON PHARMA, INC.	XLRN	Equity
XLU	UTILITIES SELECT SECTOR SPDR	XLU	ETF
XLV	HEALTH CARE SELECT SECTOR SPDR	XLV	ETF
XLY	CONSUMER DISCRETIONARY SELECT SPDR	XLY	ETF
XME	SPDR S&P METALS & MINING	XME	ETF
XNCR	Xencor, Inc.	XNCR	Equity
XNET	Xunlei Limited	XNET	Equity
XOG	Extraction Oil & Gas, Inc.	XOG	Equity
XOM	EXXON MOBIL CORPORATION	XOM	Equity
XON	INTREXON CORPORATION	XON	Equity
XONE	THE EXONE COMPANY	XONE	Equity
XOP	SPDR S&P OIL & GAS EXPLORATION & PROD	XOP	ETF
XPER	Xperi Corporation	XPER	Equity
XPO	XPO Logistics, Inc.	XPO	Equity
XPP	ProShares Ultra FTSE China 50	XPP	ETF
XRAY	DENTSPLY INTL, INC.	XRAY	Equity
XRT	SPDR S&P RETAIL	XRT	ETF
XRX	XEROX CORPORATION	XRX	Equity
XXII	22ND CENTURY GROUP, INC.	XXII	Equity
XYL	Xylem Inc.	XYL	Equity
YANG	Direxion Daily FTSE China Bear 3x Shares	YANG	ETF
YCS	ProShares UltraShort Yen	YCS	ETF
YELP	YELP, INC.	YELP	Equity
YEXT	Yext, Inc.	YEXT	Equity
YINN	Direxion Daily China 3X Bull Shares	YINN	ETF
YNDX	Yandex NV	YNDX	Equity

Und Symbol	Company Name	Deriv Symbol	Inst Type
YPF	YPF S.A.	YPF	Equity
YRCW	YRC Worldwide Inc	YRCW	Equity
YRD	Yirendai Ltd.	YRD	Equity
YUM	YUM! BRANDS, INC.	YUM	Equity
YUMC	Yum China Holdings, Inc.	YUMC	Equity
YY	YY INC.	YY	Equity
Z	ZILLOW GROUP, INC.	Z	Equity
ZAGG	ZAGG Inc	ZAGG	Equity
ZAYO	ZAYO GROUP HOLDINGS, INC.	ZAYO	Equity
ZBH	Zimmer Bionet Holdings, Inc.	ZBH	Equity
ZBIO	ProShares UltraPro Short Nasdaq Biotech	ZBIO	ETF
ZBRA	ZEBRA TECHNOLOGIES CORP.	ZBRA	Equity
ZEN	ZENDESK, INC.	ZEN	Equity
ZEUS	OLYMPIC STEEL INC.	ZEUS	Equity
ZFGN	Zafgen, Inc.	ZFGN	Equity
ZG	Zillow Group, Inc	ZG	Equity
ZGNX	ZOGENIX, INC.	ZGNX	Equity
ZION	ZIONS BANCORP	ZION	Equity
ZIOP	Ziopharm Oncology, Inc.	ZIOP	Equity
ZM	Zoom Video Communications. Inc.	ZM	Equity
ZN	Zion Oil & Gas Inc.	ZN	Equity
ZNGA	ZYNGA, INC.	ZNGA	Equity
ZNH	China Southern Airlines Co. Ltd.	ZNH	Equity
ZS	Zscaler, Inc.	ZS	Equity
ZSL	ProShares UltraShort Silver (20 shares)	ZSL	ETF
ZTO	ZTO Express (Cayman) Inc.	ZTO	Equity
ZTS	ZOETIS INC.	ZTS	Equity
ZUMZ	ZUMIEZ INC	ZUMZ	Equity
ZUO	Zuora, Inc.	ZUO	Equity
ZVO	Zovio Inc.	ZVO	Equity
ZYNE	Zynerba Pharmaceuticals, Inc.	ZYNE	Equity